

INSIDE DOPE

by GEORGE F. TABBENECK

Stories of the Week

Add Sales Stories

Wotta Man!

Traveling Salesman Story No. 999

There's a Limit to Patience

He Hadn't Read Nothin'

And Now He's a Sales Manager

The Customer Is Always Right

Suds Budweiser

Lost In a Fog

Pension Indicated

Puzzler

Super-Salesman Harvey

You Name It—I'll Sell It

Convention Story

Wrigley Analogy

One Foot In the Mouth

Stories of the Week

Dope's three books devoted to better selling: "One Foot in the Door," "The Marshal's Baton," and "It's a Great Life," are illustrated by many a story about salesmen and their troubles.

Today we give you wonderful people a brand new bunch of stories about salesmen—stories we've been saving for our next book.

Incidentally, this batch of jokes needs augmenting. If any of them reminds you of another good yarn about men who sell, please send that anecdote on to the writer. You'll be credited in our next book if we use it.

Let's get on with the salesmen stories:

Add Sales Stories

To the manager of a metropolitan department store a patron addressed the following communication:

"As a long-time customer, I have a suggestion to make. I am besieged by advertising literature from your establishment. I suggest that you spend some of the money allotted to this direct mail on salary for your faithful employees. To be specific:

"There is a poorly-dressed little man in your appliance department who is exceedingly polite, and often persuades other customers and myself to buy merchandise which actually we don't need. I think he deserves a raise."

Two weeks later, the customer received this heartwarming reply:

"We have given your letter a great deal of thought. Your point is well taken, and we have acted on your suggestion. In a special board of directors' meeting we voted unanimously to grant my father five dollars more a week."

Wotta Man!

"That Joe Philander is really the best salesman of us all," admired one of his *confreres*.

"What makes you think so?"

"Why, that fellow is so persuasive that he actually had his wife feeling sorry for the girl who lost her hairpins in Joe's car."

Traveling Salesman Story No. 999

A traveling salesman encountered some engine trouble while out on a country road one evening. When his car repeatedly refused to budge, he finally walked up to a nearby farmhouse.

"I wonder if you could put me up for the night?" he pleaded.

"Wal," hesitated the farmer, "reckon we might. We only got two bedrooms, and Maw and me sleep in one. So, reckon you'll have to sleep in t'other with our red-haired school teacher."

"That'll be fine, mister," replied the salesman with evident relief. "And I want you to know that I'm a real gentleman."

"That's fine," answered the farmer, "so's the school teacher."

(Concluded on Page 10, Column 1)



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Gibson Models To Buying Crowds Be Made In Canada By Bedard Co., Ltd.

GREENVILLE, Mich.—The Gibson Refrigerator Co. recently announced that it has licensed the Bedard Co., Ltd. of L'Assomption, Que., Can., to manufacture Gibson refrigerators in Canada.

Charles J. Gibson, president of the Gibson company, made it clear that licensing of the Canadian organization is one major result of the Gibson intensified export program.

E. Roy, president of Bedard, says his company has been producing refrigerators in Canada under the "Roy" trademark, but is already retooling for the manufacture of Gibson refrigerators and expects to have them on the Canadian market by Spring.

The Gibson licensing program according to Gibson, has been developed into an organized "customer-made" manufacturing program. The program is packaged, he said, to answer the needs of each foreign market and to fit the experience and facilities of

(Concluded on Back Page, Column 1)

Pants Mfr. Seeks To End Employee Panting with Air Conditioning

GREENVILLE, Tex.—Haggar Pants Co. in Greenville, well-known garment manufacturer, is installing a 100-ton air conditioning system in its plant, purely to provide more comfortable conditions for employees.

Air conditioning circles feel that the installation is significant, in that an industry with relatively low-scale labor finds justification in the installation of a comfort cooling system.

Normally uncomfortable conditions in the hot months are compounded in the Haggar plant by 36 steam-driven presses used in the production operations.

Management of the company believes that the installation will quickly pay for itself through the regaining of production efficiency that is always lost in the summer months.

The installation, which is being made by Matthews Engineering Co., handles 40,000 c.f.m. of air. It is a central-station type of plant.

McCray Adds Hermetics To Condensing Unit Line

KENDALLVILLE, Ind.—Addition of a line of hermetic units to its regular line of condensing units has been announced by McCray Refrigerator Co. here.

The company said it can now offer its selling organization a complete line of condensing units for all applications of remote installations. It noted that the current trend in the refrigeration industry is to the use of hermetic units in such applications.

The new line is being built by Servel and includes 24 water and air-cooled models ranging in size from $\frac{1}{4}$ to 3-hp. All these units will be available for either low or medium suction temperature applications with the exception of the $\frac{1}{4}$ -hp. unit (low temperature).

The hermetic units will carry a 5-year warranty in both the $\frac{1}{4}$ to $\frac{1}{2}$ -hp. sizes.

Announcement of the line comes after a year and a half of complete field testing on all applications of McCray cases, coolers, and reach-ins, the company stated.

"All hermetic units are completely

(Concluded on Page 21, Column 2)

Buying Crowds Jam Dallas Air Cooling Show

DALLAS, Tex.—The Southwest Air Conditioning Exposition opened at State Fair Park on Jan. 23 before a crowd that had jammed Dallas hotel facilities.

Visitors arriving for the show were met at the trains or in the hotels by Texans in full cowboy regalia. Committee members from the Lone Star state are determined to demonstrate that as good an industry show can be put on in Dallas as in New York City, Chicago, or Philadelphia.

Many new lines of air conditioning equipment are being shown at the exposition. A generally optimistic tone prevails among the manufacturers, one room cooler producer reporting that it had already booked as much business this year as had been attained in more than six months of 1949.

Room coolers have a prominent place in the show, and there are also a greater number of central systems designed for residential use than has been noted at previous shows. This is fitting for this area, which probably leads the nation in number of residential comfort cooling installations. Houston alone is reported to have recorded some 2,700 residential mechanical cooling installations in 1949.

Nov. Freezer Sales Top October Volume

(See table page 21)

NEW YORK CITY—Although world sales of home freezers jumped 16% in November as compared with the previous month, this favorable showing was still 14% below the volume in November of 1948.

The latest freezer figures (reported to the National Electrical Manufacturers Association by 29 companies) likewise showed that foreign sales were down 31% from October, 1949, but nevertheless 183% better than was done in November, 1948.

In November 7 to 9-cu. ft. freezers proved most popular.

The November, 1949 total brought aggregate volume of freezers for the 11 months to 289,795—some 33% behind where the industry stood after the same period in 1948. During the 11 months of 1949 foreign sales reached a figure of 4,491, or 23% above what was shown for the similar period of 1948.

Servel Expands Gas-Fired Conditioning Equipment

EVANSVILLE, Ind.—Advances in gas-fired air conditioning equipment have been announced by John Gilbreath, sales manager of the air conditioning division of Servel, Inc.

This is the first time that Servel has had a complete flexible line of equipment to handle all types and sizes of installations," according to Gilbreath.

Spearheaded by Servel's all-year air conditioner, the "line" also includes an absorption cooling unit, to which may be added a steam generator heating unit, humidifying and dehumidifying element, fan filter unit, and the control unit.

"The Servel absorption cooling unit occupies only 11.25 sq. ft. of floor space," Gilbreath said. "It is

(Concluded on Page 15, Column 2)

York Corp. 1950 Room Cooler Line Includes 6 Models

YORK, Pa.—York Corp. has announced that six new models of hermetically-sealed room air conditioners are now available for the 1950 residential air conditioning market.

John R. Hertzler, vice president and general sales manager, said the new line "features beauty, compact design, quicker cooling for instant comfort, air filtered of dust and pollen, year-round ventilation, improved moisture removal, finger-tip controls, stale-air exhaust, quiet operation, a five-year warranty, greater economy, and simple installation."

The two larger models have been equipped with step-matic controls which function as a humidity balancer. Also, these two brand new units (Models 150 and 200) can be equipped with ductwork attachments for conditioning multiple areas.

The $\frac{1}{2}$ and $\frac{3}{4}$ -hp. units, known as

(Concluded on Page 4, Column 3)

NARDA Will Seek Mfr. Aid on Fair Trading

CHICAGO—In 1950, the National Appliance & Radio Dealers Association will solicit the cooperation of manufacturers in all states where fair-trade pricing is now legal, it was indicated at the group's recent annual meeting here.

A resolution to that effect was approved by members during the meeting. The resolution also called for NARDA to continue to carry on an educational program on the operation and benefits of fair-trade pricing.

The association's approach to the fair-trade problem was summarized by President James Lee Pryor in his report to the membership. He said: "NARDA members everywhere are determined to face competition, for competition is healthy, it is necessary

(Concluded on Page 21, Column 3)

G-E 'Consent Election' Agreed to by UEW

WASHINGTON, D. C.—The United Electrical Workers has signed an agreement with the National Labor Relations Board for a "consent election" among 125,000 General Electric Co. employees, according to Albert J. Fitzgerald, president of UE.

The election will permit workers to choose between UE and the International United Electrical Workers (C. I. O.) as their bargaining agent.

Prior to this announcement IUE-CIO, in a telegram to President C. E. (Concluded on Page 21, Column 3)

Truman Message Sheds No Light on Mfr. Excise Tax

WASHINGTON, D. C.—President Truman has presented his special message to Congress, but the appliance industry is still wondering what, if anything, will be done about eliminating or reducing manufacturers' excise taxes.

Mr. Truman said nothing about such taxes. He did recommend cuts in some retail excise taxes, however.

"I believe that reductions are most urgently needed in the excise taxes on transportation of property, transportation of persons, long-distance

(Concluded on Page 21, Column 1)

High Steel Cost

May Up Prices

PUBLIC LIBRARY
DETROIT

1/21/1950
Mfrs. Boost Output in
Face of Big Steel Prices,
Continuing Coal Strike

DETROIT—As roving pickets last week were still keeping some 75,000 soft coal miners out of pits in Pennsylvania and West Virginia, the dilemma of major appliance producers grew more perplexing.

On one hand were the prospects of rising steel prices (boosting appliance production costs) and dwindling steel supplies. On the other was the concerted cry of retailers that any increase in the price of appliances would do considerable damage to currently strong consumer demand.

Perhaps most dismal to contemplate was the fact of high steel cost.

W. A. Blees, vice president and general sales manager of the Crosley Div. of Avco Mfg. Corp., summed up the situation pretty well. At a press conference during the recent Winter Home Furnishings Mart he hinted the major appliance industry may soon have to make some increases. Said Blees:

"There is a universal misconception on the increase of steel costs to users. The average increase is \$4 per ton, but 'extras' (especially fabricated types) have gone up much more than that in many cases."

[Some advances were quoted as high as \$16 per ton and many components were said to have risen out of proportion to the increase in basic mill prices of steel. Late last week an official of Allegheny Ludlum Steel Corp. testified before the Senate-House Economic Committee that the \$4-a-ton increase was inadequate and that his firm was considering another rise in the price of stainless steel.]

No date has as yet been set for possible appliance price increases although, as reported earlier in the NEWS, some gas range producers

(Concluded on Page 21, Column 2)

Auto Accident Kills Morrison of Sunroc

GLEN RIDDLE, Pa.—George S. Morrison, 35, vice president in charge of sales for Sunroc Co., manufacturer of water coolers, was killed instantly on Friday evening, Jan. 20, when a steel projection from a parked commercial trailer ripped the top off his automobile on a country road near Medina, Pa.

His wife, Mae, seated beside him, escaped with relatively minor headcuts, bruises, and shock. State Police said the steel shaft missed her head by a couple of inches."

A low trailer used to carry a steam shovel was parked on the shoulder of the road, on a long curve. Protruding from the rear of the trailer, at a height of about $5\frac{1}{2}$ ft., was the 10-ft. steel arm used to support the steam shovel's boom. It was this metal projection which cut away the car's roof and killed Morrison.

Morrison was a brother of Orville C. Morrison, president of Sunroc. Throughout his career, the former had been active in all phases of the business and during the late war had traveled all over the country expediting the procurement of materials for government contracts.

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\$2,500 with New Refrigeration
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SELLING BY SLOGANS:

Dealer Covers Front Window with Contest Entries Dramatizing Freezer Advantages

DENVER—One day some time back, William Edmondson, sales manager for Denver Appliance Co., was checking his firm's sales figures on home freezers.

What he saw convinced him that something had to be done—and it was. The "something" proved so effective, according to Edmondson, that the store is now selling as many freezers as any other major appliance.

This experience has convinced Edmondson that freezers can be handled profitably if the dealer will put some hard work into his promotional program.

The Colorado concern has undergone since 1946 largely the same experience with home freezer promotion as appliance dealers in other parts of the country.

While the Colorado capital, surrounded by vegetable farms, packing houses, etc., seemed a "natural" for home freezer use, sales simply did not materialize easily.

"We utilized the usual types of newspaper promotion, store displays, etc., and sat back waiting for homeowners to come in and select from our three lines of home freezers," Edmondson recalled.

However, despite a lot of whooping it up by our local utility and plenty of publicity in national magazines, we found home freezer sales disappointingly slow."

To set up some form of effective merchandising program, Edmondson and J. H. Huggins, head of the firm, did some intensive research.

First, they began asking friends and acquaintances how much the

Name Irmam Sumner 113
 Address 1650 Logan St Tel. No. Al 4577
 Write in 25 words or less:
 I would like a Home Freezer because: it
ADDS Party-Preparedness to
every day;
SUBTRACTS hours of
shopping.
 (Use other side if necessary)
over

Contest-winner (above) told how freezer ADDED, SUBTRACTED, MULTIPLIED, and DIVIDED. (See story for complete text.)

latter knew about home freezers. They called on a few homeowners in suburban districts selected at random.

"The upshot of this was that we found that home freezers in today's market are in exactly the same place as electric refrigerators were 20 years ago," Edmondson said.

"We found that homeowners had absorbed little or no understanding of home freezers, and thus had no desire for them. It was not long before we realized that it would be necessary for us to 'sell the need' rather than the home freezer itself."

"Selling the need," Edmondson recognized, entailed a lot of things. He realized that it meant more demon-

stration, more publicity, more installations in resident's homes to which prospects could be referred. Also, he realized, it would require plenty of doorbell ringing, house-to-house canvassing, and calls out in the remote suburbs and truck-gardening districts to get the ball rolling.

Therefore, the Denver appliance dealer went to work on the problem by setting up an outside selling organization, and backing this up with a clever contest.

He put two men of a six-man outside selling crew through home distributor training schools, seeing to it that each man became an expert on the subject.



Denver Appliance Co. assured steady supply of slogans for window use by conducting a contest.

These men were then assigned suburban districts surrounding Denver, as the most productive sales territory. They were also assigned to pass along their knowledge of home freezers to the other four salesmen by means of formal sales-training meetings held once a week in the store.

"We simply started to do a lot of missionary work, paying our men to get out and teach the homeowner something about what the home freezer could save for him, and making certain that everybody contacted got a clear concept of the home freezer's place in electrical living—whether he made a sale or not," Edmondson said.

At the same time (early in 1948), Denver Appliance began "selling the need" through the constant use of slogans on the store windows, in newspaper display advertising, and on banners draped across home freezers.

Each slogan accents a specific home freezer advantage. Edmondson's theory is that by continually presenting various aspects of the home freezer to the public, one or another will evoke interest.

Therefore, the window of the home freezer showroom is constantly covered with signs which convey such messages as "It's time to freeze"—"Mountain trout on New Years Eve"—"The Deer season is here"—"Save 30% on your food bills"—"Planned-over-meals"—"Save time, steps, and money"—"Eliminate canning."

"The slogans are getting results," Edmondson said.

"For example, we have sold several home freezers to hunters who remember with distaste losing an entire deer or elk carcass because there was no place to properly refrigerate the meat. The slogan 'Eliminates canning' has started a trend of thought with many housewives passing on the bus, who drop in to ask questions."

It wasn't long after establishing

the slogan program, backed up by outside calls, before Denver Appliance "ran out of slogans." In order to insure a complete supply of them, the store staged a contest in conjunction with a "Home Freezer School."

Edmondson offered a new 6-cu. ft. home freezer in return for the best and most original 25-word completion to the statement "I would like a home freezer because..."

More than 150 contest entries were judged clever enough for the finals. The winning slogan was entered by a Denver housewife, who said she wanted a freezer "because it adds party-preparedness to everyday; subtracts hours of shopping; multiplies money by 'best season' buying; divides cooking drudgery by safe-keeping 'cooked aheads'."

Edmondson utilizes the slogan continuously in both newspaper advertising and on window posters.

During the week, the general public was invited by newspaper display advertisements to attend a complete demonstration of Kelvinator home freezers in the showroom. From 150 to 200 women attended.

The freezer school was followed later by similar schools staged by the Colorado Public Service Co., several Denver department stores, and other appliance dealers, soon began to show results. During one month, 15 home freezers were sold to drop-in customers, and as many more by the outside salescrew.

Every customer who entered the slogan contest was religiously followed up, with a much heavier percentage of sales per call than the store had previously experienced with any other appliance line.

"Our two home freezer specialists are now going out as far as 50 miles from the store, either following up leads furnished by the contest, or actually ringing doorbells," Edmondson said. "In either case, they are selling the need efficiently enough that we're getting sales results."

demand
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 ALL 3**



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Serving home and industry AMERICAN-STANDARD • AMERICAN BLOWER • CHURCH SEATS
 DETROIT LUBRICATOR • KEWANEE BOILER • ROSS HEATER • TONAWANDA IRON

Just look at the inside

Have you ever seen a cleaner, brighter finish? The inside of Wolverine Copper Refrigeration Tubing is smooth, dry, clean, and uniform—every inch of it—making its use most efficient, dependable, and economical.

It comes to you now in 50-ft. coils, individually cartoned so it is easy to buy, handle, stock, merchandise, reship, inventory, and use.

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1413 CENTRAL AVENUE

DETROIT 9, MICHIGAN





She'll love the year-in, year-out dependability of its TECUMSEH Hermetic unit

Yes, she finds it easy to love the smart new refrigerator that has just entered her home. She loves it for its beauty, for its modern up-to-the-minute conveniences, *its smooth, vibrationless operation.*

But the nice thing about it is that she'll love it more and more as the years go by. For, long after it has lost its "brand newness", she will be loving it for the faithful service it has given through the years—thanks to the precision-built Tecumseh Hermetic Unit with which it is equipped.

For Tecumseh Hermetic compressors are famous the world over for their long-lasting, trouble-free performance, their low operating cost.

Here are just a few of the many reasons for their superiority:

Large, oversize bearings; counterweighted crank-shafts; super-finished bearing parts ($\pm .0001"$); Chieftainized connecting rods and pistons; simple and positive motor controls; leakproof motor terminals.

Many models include both fan-cooled and static condenser type units. In various combinations of compressors, motors and condensers, they cover the entire range of applications from $\frac{1}{9}$ h.p. to $\frac{3}{4}$ h.p.

Write for complete information.



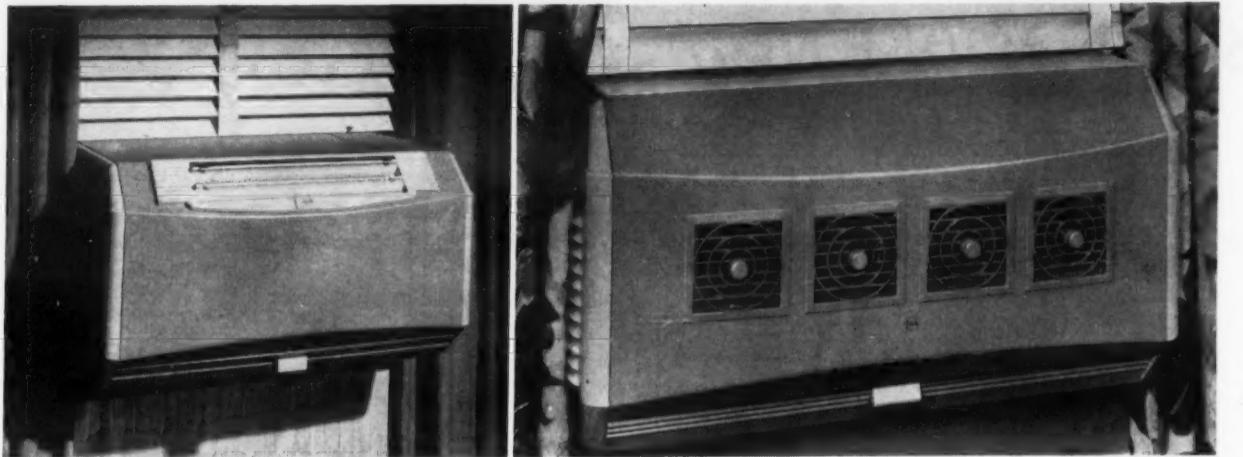
TECUMSEH PRODUCTS COMPANY

TECUMSEH, MICHIGAN

EXPORT DEPARTMENT: 2111 WOODWARD AVE., DETROIT 1, MICH.

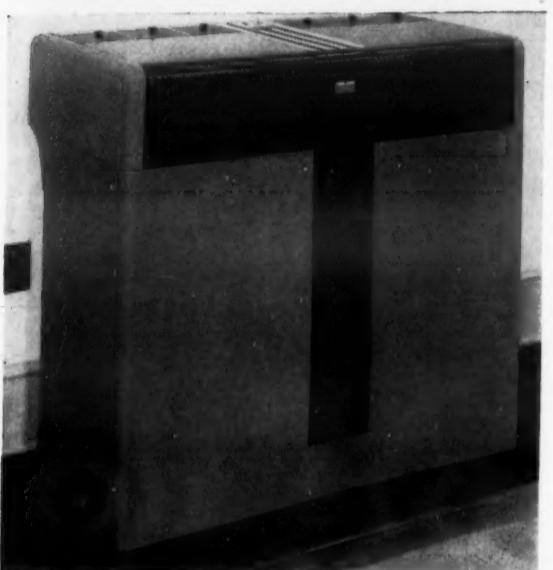
World's largest independent producer of compressors and condensing units for the refrigeration industry.

3 of the 1950 Room Coolers York Is Showing



UPPER LEFT: Model 23, $\frac{3}{4}$ -hp. window unit.

UPPER RIGHT: Model 12, $\frac{1}{2}$ -hp. window unit.



LEFT: Model 150, $1\frac{1}{2}$ -hp. console unit.

York Line--

(Concluded from Page 1, Column 4)

Models 12 and 23, are window-sill units. They are finished in two-tone and dark ivory to harmonize with the interior decorating. A compact arrangement permits minimum depth inside window.

"An exclusive cooling maze coil of staggered-tube and corrugated-fin design makes it possible to wring excess moisture from the air to provide a cool, dry, refreshing climate," Hertzler said. "A seven-ply easily replaceable filter cleanses the air of dirt and impurities which results in lower cleaning bills. Pollen removal relieves hayfever and asthma sufferers, too."

"Finger-tip controls permit the introduction of outside air at any

time, with or without cooling, and makes possible a healthful atmosphere when cooling is not needed. A pump-out control quickly removes stale air caused by excessive smoking in the conditioned space."

Cabinet insulation and rubber mounted mechanism, he claimed, reduces the operating sound to a minimum. He added that closed windows eliminate annoying traffic noises.

"All six new units have cooling systems which are hermetically sealed at the factory," it was pointed out. "The entire refrigerating circuit is sealed as tightly as a light bulb so that the refrigerant charge can't leak out and dirt can't seep in. These sealed circuits are warranted service free to the owner for a five-year period."

Models 33 and 100 are $\frac{3}{4}$ and 1-hp. console units respectively, and are set in veneer cabinets, which are "styled like the finest furniture, harmonizing with the surroundings." A "unique design" is said to eliminate projection outside window, and permit window closing when desired.

"Like the other units, these two have four way air-flow grilles which may be adjusted to direct the conditioned air evenly throughout the entire area, thus eliminating chilling drafts," Hertzler pointed out.

Models 150 and 200, (1 $\frac{1}{2}$ and 2-hp. units respectively), are described as compact, self-contained, console-type air conditioners designed for commercial establishments and homes. These two units may be equipped with a ductwork attachment for conditioning multiple areas.

"A convenient selector switch controls alternate 'fan' or 'cooling' operation," Hertzler explained. "The 'fan' position provides circulation and ventilation without cooling. When in the 'cooling' position the control works automatically through a thermostat to start and stop the two hermetically sealed refrigeration systems in sequence and thereby provide the exclusive step-matic operation."

"Because of the use of multiple refrigeration circuits these conditioners offer the same advantages as do the large 3-hp. and 5-hp. Yorkaire conditioners. Full cooling capacity is automatically provided when needed or partial cooling capacity when greater relative humidity reduction is required."

The room air conditioners, along with 1950 packaged models of York's "FlakIce" and ice-cube making equipment, are being displayed at two-day distributor-dealer-industrial sales shows. The shows are being presented in nine cities.

Executives from the home office headed by Hertzler are conducting the showings and participating in the programs, which are being staged on the pattern of a trade fair. The second day is devoted to the company's industrial sales personnel, at which time the new V/W ammonia compressor is shown.

Group Announces Mart Dates for Next 2 Years

CHICAGO—The Board of Governors of the American Furniture Mart recently confirmed the market dates already established up to and including the Winter Market in 1952.

The dates as confirmed are:

Summer, 1950—June 19 through 29.
Winter, 1951—Jan. 8 through 19.
Summer, 1951—June 18 through 28.
Winter, 1952—Jan. 7 through 18.

The Market Dates Committee, consisting of representatives from various associations within the home furnishings industry, also selected these dates.

Action was delayed on dates beyond January, 1952 because of possible conflict with the Republican National Presidential Nominating Convention, which may be held in Chicago during the third week of June in 1952.

Dates for the 1951 National Housewares Show have been tentatively scheduled for Jan. 18 through 25, according to the National Housewares Manufacturers Association.

Attendance at the Winter Mart, just ended, was reported in excess of 25,785 by Gen. Lawrence Whiting, American Furniture Mart president. This sets an all-time record.

Another Air Conditioned Bldg.

FORT WORTH, Tex.—Warren McKeever has begun construction of a \$100,000 office building at Berry and McCart. The two-story structure will be air conditioned.

R. J. Flanagan Named Mgr. Of Advertising, Sales Promotion for Mitchell

CHICAGO—Robert J. Flanagan has been appointed advertising and sales promotion manager of Mitchell Mfg. Co. here, according to a recent announcement by B. A. Mitchell.

Flanagan succeeds Armand S. Zucker, who has taken over the newly-created post of director of design and development.

Prior to joining Mitchell, Flanagan was assistant advertising manager of a large Chicago radio and appliance manufacturer. An infantry officer in World War II and still active in the Officer's Reserve Corps, he started his business career in the advertising department of Commonwealth Edison.

Zucker was an account executive and partner in a Chicago advertising agency, prior to joining the Mitchell organization in 1948.

Canadian Mfrs. Rap Gov't for Allowing Ice Rink Ammonia Jobs

NIAGARA FALLS, Ont., Can.—The Canadian Refrigeration Manufacturers' Association has condemned the Ontario Department of Labor for permitting the installation of direct ammonia refrigeration systems in hockey, skating, and curling rinks, Garnet McCandless, secretary, announced.

Permission was in direct contravention of the Mechanical Refrigeration Code, which was adopted by the province under the Steam Boiler Act by Order-in-Council in 1939.

The condemnation, expressed in a motion was passed at the third annual convention of the association in Niagara Falls.

McCandless said that ammonia passes through the pipes of such a system and that a serious leak could cause a major panic in public assemblies in skating rinks.

"This association feels that the Minister of Labor should review with care the enormous responsibility entailed by his decision and must be prepared to accept the responsibility should an accident occur," McCandless stated.

A rink which uses the direct expansion ammonia system is cheaper to build, but over the years, through constant wearing, could be dangerous, he said. Manufacturers feel the saving of \$2,000 or \$3,000 does not justify the danger hazard.

McCandless said the Minister of Labor had disregarded the recommendations of the Refrigeration Safety Code Committee of the Canadian Standards Association and had issued orders to permit installation of direct expansion ammonia rinks, with some extra safety equipment.

R. H. Lock told refrigeration manufacturers at the meeting that the pipe under a rink's surface is laid in sand and that the action of skaters on the ice surface causes a movement of the piping. Over a period of years it might wear badly and a serious leak occur.

W. W. Miller, Toronto, was elected president of the association, and H. T. Martin, Brantford, vice president. C. D. Dowson, Toronto, is immediate past president. Directors are C. G. Heilig, Oakville; R. H. Lock, Toronto; Ted Milner, Toronto; and D. B. Thomas, Toronto.

Universal Attains Full Production on New Line

LIMA, Ohio—Three models of 8.2-cu. ft. refrigerators, a companion line to the 9-cu. ft. models, samples of which were shown to many Universal distributors at a recent meeting held here, went into full production for Universal distributors at the Arcticraft Mfg. Corp., contract manufacturer, recently, the company has announced.

Production is scheduled so that these various models will be available for mixed shipment with the previously introduced 90 Series.

The new line consists of a master deluxe with horizontal freezer chest holding 67 lbs. of frozen food and ice, and two with U-type evaporators.

Standing 2 in. shorter, they are very similar to the 9-cu. ft. models in appointments with the master deluxe and deluxe featuring iridescent gold and sylvan green interior trim.

RECOLD
Dri-Fan

The Evaporative Condenser
That Revolutionized An Industry

DRI-FAN—an engineering achievement that adds many years of life to evaporative condenser operation. A revolutionary design keeps the hot water line from freezing and adds a big advancement to the commercial refrigeration industry.

GUARANTEED PROTECTION

Refrigeration ENGINEERING, INC.

Wisconsin Study Reveals Facts on Locker Plant Patrons, and Home Freezer Owners

MADISON, Wis.—A survey to determine what is happening to the frozen food locker industry in Wisconsin has turned up some interesting sidelights on why former locker plant patrons no longer rent lockers and how well they like their home freezers.

Information was collected from locker plant operators, patrons, former patrons, and home freezer owners, and a brief progress report on the project was included in the latest annual report of the Wisconsin Agricultural Experiment Station.

Some of the former locker renters, it was found, had stopped renting because they bought home freezers; because they found costs too high; because they felt the use of lockers was inconvenient; and because they did not have food to be stored. Most of the former patrons said they might rent lockers again if they had more food to store; if their home freezers failed; or if costs went down.

Home freezer owners reported both advantages and disadvantages for their freezer units. Users said they like the home freezers because they were handy, saved time and money, were available at any time, gave them better quality food, and per-

mitted them to store left-overs and small amounts of food easily.

On the other hand, they also reported that purchase and upkeep costs seemed too high; that the home freezers were not satisfactory for some foods; that they didn't like the extra work of preparing the foods and defrosting the freezer; and that the size of some freezers was unsatisfactory. Generally those who didn't like the size, felt that their freezers were too small. All in all, however, more home freezer owners were satisfied with their freezers, than were dissatisfied.

The Wisconsin study was made by Martin A. Schaars of the Wisconsin Experiment station, in cooperation with Knute Bjorka of the U. S. Department of Agriculture's Bureau of Agricultural Economics. Similar surveys have also been under way in eight other states and complete reports on this project are to be published later.

Jamestown Dealers Elect Wm. Hake for 20th Term

JAMESTOWN, N. Y.—William S. Hake was re-elected to his 20th term as president of the Jamestown Electrical Dealers Association at a meeting in Hotel Ellington.

Other officers elected were: Walter Cole, vice president; John Johnson, secretary; and Lawrence Swanson, treasurer.

In his annual report, Hake told the dealers that a local advertising program to stimulate more interest in adequate home wiring had produced good results. Coupled with the efforts of local appliance dealers, the program has resulted in increased interest in better wiring shown by prospective appliance purchasers.

More than 1,000 homes in Jamestown alone have increased their wiring facilities as a result of the campaign, it was reported. Hake pointed out that the rise in the number of appliances, especially heavier appliances, has necessitated better wiring in the average home in order to cope with the power requirements.

Lund Heads Adv., Promotion For Murray Appliance Div.

CHICAGO—Murray Corp. of America has recently announced the appointment of Malcom Lund as advertising and sales promotion manager of the company's home appliance division.

At the same time the company appointed Larry E. Coen as regional sales manager for the division. He will have his headquarters located here.

1950 Thomas' Register Ready for Distribution

NEW YORK CITY—Thomas Publishing Co., 461 Eighth Ave. here has announced that the 1950 edition of Thomas' Register of American Manufacturers (40th edition) is ready for distribution.

Thomas' Register, a national purchasing encyclopedia, is published in three volumes and index. Price is \$15 for new subscribers and \$12.50 for renewals.

Successful Hunters Given Freezer Discount Coupon

SALT LAKE CITY—Offering deer hunters who bring in proof of an exceptional kill a coupon worth a substantial discount on the purchase of a new home freezer, has helped boost freezer sales for the Bradley-Badger Appliance Co., which is located here.

The stunt was advertised with a quarter-page display advertisement in a Salt Lake City newspaper, coincidentally with the opening of the fall deer season. In the advertisement, a headline stated that successful hunters would be offered a \$100 discount on the deluxe model Orley home freezer, in which to keep the resultant venison.

The stunt attracted the attention of many hunters, most of whom are sportsmen with better incomes, according to Bradley-Badger—with the result that a lot of prospects who heretofore had merely "considered" purchase of a home freezer, for freezing game meats, came in and signed up.

Don't Get 'TV Happy,' NARDA Members Warned

CHICAGO—"Don't get 'TV happy.'"

That was the warning given to retailers attending the recent annual meeting of the National Appliance & Radio Dealers Association by Harry Kintzel, Allentown, Pa., appliance dealer.

"This problem will be extremely difficult to control," he admitted during a panel discussion on "Selling TV-Radio Profitably." "You can't do too much about it because the American public is demanding TV at every turn of the road."

"Their enthusiasm for TV is being whetted constantly by the daily press, magazines, and in living-room, taproom, and sidewalk conversation. Even though you will try to control it, they will still ask for and insist on TV."

"If the entire organization gets 'TV happy' and you forget about 'white goods' and other larger discount items, you'll come to the end of the month and find your gross profit has dwindled considerably. There's too much difference between 33% and 26% to allow you to experiment too long."

"Your sales organization will require constant counsel and leadership in this matter. Take them into your confidence and explain their stake in keeping a 'balanced-job' performance sales sheet. It will pay off in the long run."

American Central Div. Appoints Regional and District Managers

CONNERSVILLE, Ind.—Appointment of two new regional managers and one district sales manager was announced recently by F. F. Duggan, general sales manager of the American Central Div., Avco Mfg. Corp. here.

Roy S. Gallagher was named southern regional manager; John E. Bogan, central regional manager; and Dale Mikesell, Cleveland district sales manager.

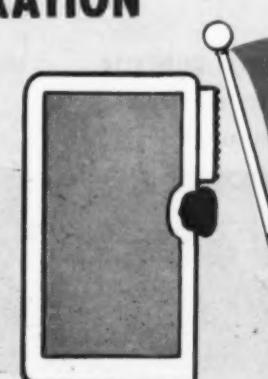
Gallagher was formerly general manager in the appliance department of a large southern department store. He is making his headquarters in Atlanta.

Bogan was merchandising manager for one of the country's largest appliance manufacturers for a number of years, Duggan said. He has been active in nationwide advertising and sales promotion activities. He will have headquarters located in Chicago.

Mikesell, who has been in the wholesale kitchen business for the past two years, will call on distributors in Cleveland; Detroit; Grand Rapids, Mich.; Saginaw, Mich.; Toledo; Columbus, Ohio; Dayton; Cincinnati; as well as Huntington, W. Va.

A REVOLUTION IN REFRIGERATION

The daringly different Coolerators for '50 hold more food—take less space—because they provide all safe cold top to base and front to back. The sketch at the right shows how the amazing new Zerolator is mounted on the back to free the whole interior for safe food storage. This all-new design makes it possible for Coolerator to offer the world's first genuine Space Savers—big 9½ cu. ft. models only 28" wide. See the finest "Leader Model" in the industry—the best natural "Step-Up" since the war—at your Coolerator distributor now.



Coolerator

Another Coolerator First for '50

THE COOLERATOR COMPANY
DULUTH 1, MINNESOTA
CHICAGO OFFICES—11-107 MERCHANDISE MART

900-Bed Hospital Remodels Central System, Reduces Costs, Yet Renders Better Service

ROCHESTER, Minn.—In this town of 38,200 population—hotel registers read like pages from "Who's Who" and most any day "faces in the news" are recognized on the streets. But, there is a reason. Often referred to as "medical center of the world," Rochester and the famed Mayo Clinic are of synonymous import in the fields of medicine and surgery.

Here it is that the St. Mary's hospital is located. Virtually a city within a city, this 900-bed institution is operated by the Sisters of St. Francis.

Vast facilities of modern design help set high standards for care, comfort, and treatment of patients. This is particularly true of the gigantic refrigeration system working 24 hours each day, year after year, for the St. Mary's hospital.

The scope of the refrigeration job is staggering. Serving patients, many of whom are restricted to special diets, in the 900-bed hospital on a daily basis calls for tremendous quantity and variety of foods.

Not Just Food, Medicine Too

Beverages of all kinds are necessary along with a wide assortment of meats—to say nothing of the biological and medical requirements.

For example, the milk and cream supply for a single year reach astronomical proportions with about 62,500 gals. passing through cooling rooms.

The hospital maintains its own milk pasteurization and bottling plant. About 140,000 lbs. of meat, alone, are consumed during a year's time. The supply of fresh fruits and vegetables, together with other perishables requiring refrigerated storage, rounds out a gigantic yearly food total.

To do this job, more than 100 separate pieces of Frigidaire commercial refrigeration equipment have been put to work.

Along with maintaining its own milk processing plant, the hospital boasts 10 walk-in cooling rooms, a butcher shop, in addition to several cafeterias.

All told, there are 34 Frigidaire sealed rotary and reciprocating type refrigerating compressors on the job, operating scores of refrigerators, nine low temperature cabinets, 13 forced air cooling units, six water coolers, two large ice makers, a milk cooler, and four refrigerated cafeteria serving units.

The mammoth installation was planned by St. Mary's own engineers, by P. T. Jude, commercial sales manager of Frigidaire's Twin Cities branch, and by E. G. Quick, whose architectural firm handles design and construction for the Sisters of St. Francis.

For the most part, installation was made by the Reichert Refrigeration Co., Frigidaire commercial dealer here.

The hospital refrigeration improve-

ment story dates back to 1940 when a new building addition was erected. "Freon" refrigerating equipment was installed in this new structure.

Soon after, hospital management became interested in replacing an old 65-hp. carbon dioxide central refrigeration system serving the older section with modern equipment. Following extensive studies and surveys, new Frigidaire compressors, coils, and a variety of other comparatively lightweight packaged products were moved into position.

More Refrigeration for Less

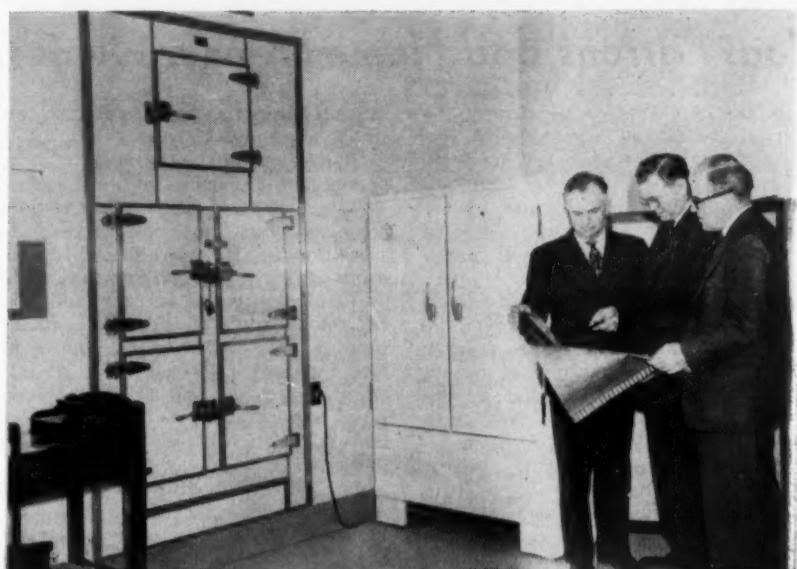
Once in operation, the new equipment began to pile up a large saving for St. Mary's, estimated at \$2,500 per year, even though more actual refrigeration was provided than by the old central system.

"Changing from a central system has reduced the actual power used for refrigeration from 65 to 15-hp.," declared R. V. McCann, AIA Associate of Maguolo & Quick, St. Louis architectural firm in charge, "saving about 25,000 gals. of water per day."

"This reduction was made while providing additional refrigeration with greater efficiency. In using the foregoing figures, the saving is computed on the basis of cost of electricity at 1.25 cents per k.w.h. with the motors in operation 50% of the time."

(Concluded on next page)

Over 100 Pieces of Equipment Needed for Job



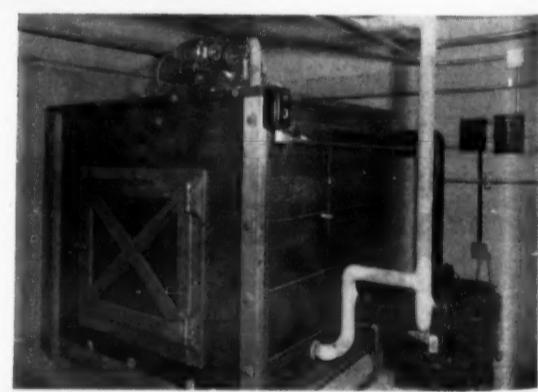
REACH-INS: Looking over plans to remove an old brine-job reach-in refrigerator in this picture are, left to right, S. P. Kingston, executive engineer at St. Mary's hospital; P. T. Jude, commercial sales manager of Frigidaire Sales Corp., Twin Cities district; and R. V. McCann, of Maguolo & Quick, architects, St. Louis. Model F-20 reach-in pictured here actually provides more usable storage and shelf area.



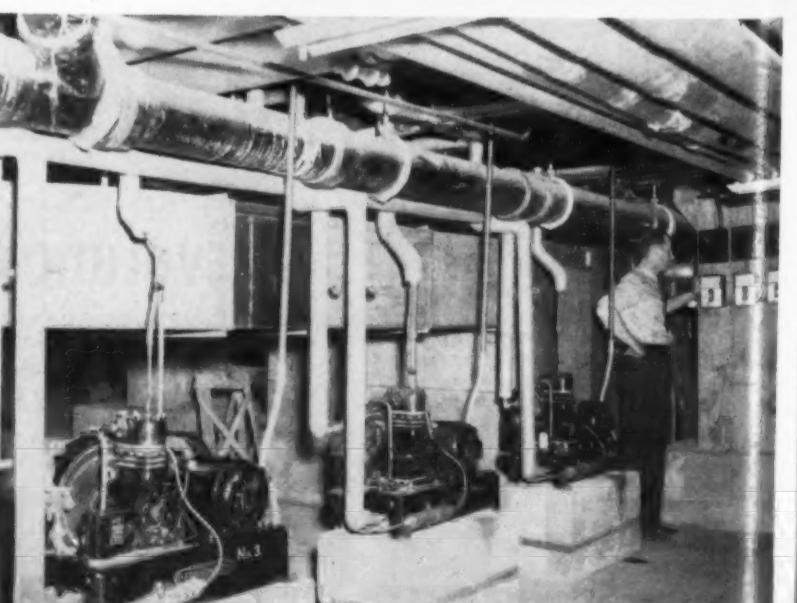
MILK COOLERS: Some 62,500 gallons of milk and cream are used yearly at St. Mary's. The Frigidaire forced air coil (upper right) is hooked up with a 3-hp. compressor that cools four similar walk-ins used for milk, vegetables, etc.



FROZEN FOODS: A walk-in with freezing temperature is to the left and a conventional temperature storage unit to the right.



ICE-MAKER: Two more Frigidaire units "doing chores" are these 2-hp. compressors connected to a 1-ton ice-maker shown here.



POWER SOURCE: W. J. Eichinger, maintenance chief at St. Mary's, checks over a list of units cooled by this bank of Frigidaire compressors which have replaced the hospital's old central system.

THE WORLD'S

leading appliance manufacturers are listed among Grand Rapids Brass customers. Because in building the

FINEST

products, in terms of quality and value, it is only natural that they select hardware for their

APPLIANCES

that will continue to look like new and function perfectly through long years of service — hardware which will

HAVE

such customer-attracting features as smart, modern designs, beautiful chrome-plated finishes, and locks with "Living Action" which assure easy dependable operation.

GRAND RAPIDS BRASS

will be glad to estimate your needs in commercial, domestic refrigeration hardware, stove hardware and nameplates for all kinds of appliances . . .

HARDWARE

that will give you and your customers assurance of satisfaction, outstanding quality and workmanship.

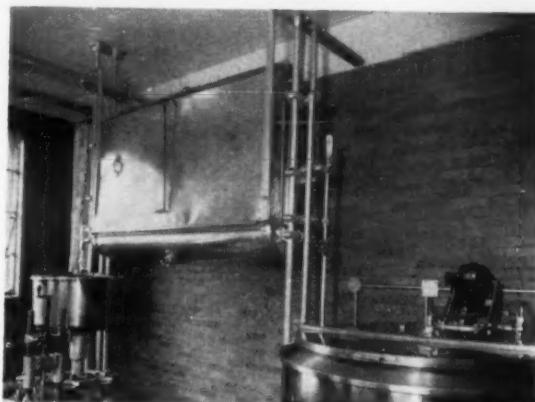
Manufacturers of hardware for COMMERCIAL REFRIGERATORS, DOMESTIC REFRIGERATORS, GAS STOVES, WASHING MACHINES, ELECTRIC RANGES

DIVISION OF CRAMPTON MANUFACTURING COMPANY

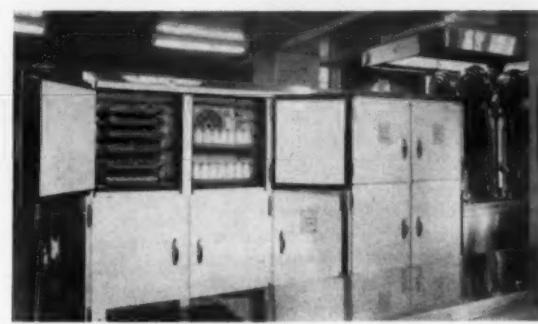
Grand Rapids Brass
COMPANY

GRAND RAPIDS 4, MICHIGAN

Varied Applications Meeting Day-to-Day Needs



Chilled water from a Frigidaire farm milk cooler is pumped from the floor below into this surface milk cooler, which is installed in the milk pasteurization and bottling plant of St. Mary's hospital.



Typical of the many reach-ins used in St. Mary's cafeterias and tray service rooms is this bank of four. Here special diets and menus receive special attention.

Over 40 Refrigerators Keep Perishables In Cafeterias and Tray Service Rooms

(Concluded from preceding page) time and including the pumping of water."

Ten walk-in type cooling rooms play an important part in bulk storage of perishables for the hospital. Included is a walk-in cooling room for milk and cream, together with a fresh vegetable storage cooler, meat storage cooler, and "left-overs" cooling room.

These refrigerated storage rooms are cooled by five forced air cooling units suspended from the ceilings and hooked up to a single Frigidaire water-cooled reciprocating compressor of 3-hp. capacity.

Three additional "normal temperature" walk-in cooling rooms are provided. Each is refrigerated by two forced air cooling units mounted on the walls and connected to three 1/2-hp. reciprocating water-cooled compressors.

A fifth walk-in, also of the "normal temperature" type is refrigerated by two forced air cooling units, suspended from the ceiling and hooked up with a 1-hp. water-cooled reciprocating compressor.

Food freezing is accomplished in a low temperature walk-in equipped with a "speed freezer," which is connected with a 2-hp. reciprocating compressor of the water-cooled type.

Two ceiling-type forced air cooling units hooked up with a single 1 1/2-hp. compressor, refrigerate a garbage cooling room.

A special built-in drinking water system is equipped with two remote tank-type water coolers, each with a capacity to chill more than 50 gals. of water per hour.

The water cooling system is hooked up with a single 1 1/2-hp. water-cooled compressor. In addition, there are four remote insulated water coolers, suitable for cooling either carbonated or non-carbonated water. A 1 1/2-hp. compressor supplies the refrigeration.

In the kitchens, the cafeterias, tray service rooms—at nurses' stations throughout the hospital—more than

40 refrigerators of many sizes and descriptions protect and preserve perishables.

A single 3/4-hp. water-cooled compressor cools a series of three commercial refrigerators while a 1-hp. compressor of similar design refrigerates seven others. Seven more are hooked up with seven 1/4-hp. air-cooled compressors.

Strategically located at nurses' stations are tight 20-cu. ft. capacity Frigidaire commercial reach-in refrigerators. They are refrigerated by new sealed rotary Meter-Miser compressors of 1/4-hp. capacity.

Also providing refrigerated storage are ten 8-cu. ft. capacity self-contained household refrigerators. A 6-cu. ft. household refrigerator, together with a 13-cu. ft. model, are also included.

A large double door commercial refrigerator, equipped with two wall-mounted forced air cooling units, and

refrigerated by a single 1/2-hp. sealed rotary Meter-Miser compressor from remote location, bolsters refrigerated storage facilities.

A special low temperature refrigerator, equipped with cooling plates, and two 12-hole ice cream cabinets is connected to a 1-hp. compressor.

In addition two special counter refrigerators equipped with cooling plates, plus four special 10-gal. serving ice cream cabinets, are included in cafeterias. Refrigeration for this equipment is afforded by a single 1-hp. water-cooled compressor.

A 1 1/2-hp. compressor of similar design cools three cafeteria cold units, each 20 by 75 in., and a single 20 by 54-in. pan. Two other low temperature units, both four-lid, double row, self-contained ice cream cabinets, provide additional frozen storage.

Extra large ice making facilities fulfill the hospital's requirements for providing ice packs to patients. A pair of 2-hp. compressors supply low-temperature refrigeration to two special 1-ton capacity ice makers, installed especially for this purpose.

There is also an unusual application of a Frigidaire farm milk cooler. Located a floor below the hospital's pasteurization room, an eight-can capacity farm cooler, equipped with a freezing coil and rack, is used to chill water used in the processing operation. The cold water is pumped from the farm cooler tank up to a surface type cooler in the milk processing room.

Refrigerators Still Lead With Canadian Consumers

TORONTO, Ont., Can.—Production has caught up with the huge wartime backlog of demand. Out of all the products that were in short supply in the early post-war period, household refrigerators stand out as the only one where demand has not yet been met.

That is the opinion of Laurentide Acceptance Corp., which, after surveying all items on which it finances the retail trade, says, "The household refrigerator seems to be the one commodity for which demand still exceeds supply."

Calling the last six months of 1949 the "transition period," President Roland Therien stated in the report, "It marks the return to normalcy in Canadian business."

McCoy To Address Detroit ASRE At Rackham Bldg. on Feb. 6

DETROIT—D. C. McCoy, veteran refrigeration engineer long associated with Frigidaire Div., General Motors Corp. at Dayton, will discuss "Developments In Household Refrigeration" before the Detroit section, American Society of Refrigerating Engineers, at 8 p.m. Monday, Feb. 6, at the Rackham Educational Memorial here.

ALCO'S 25th ANNIVERSARY



ALCO has the right answer to every refrigerant control problem.

Write for detailed information on your intended use.

ALCO has refrigeration under control!



ALCO VALVE CO.

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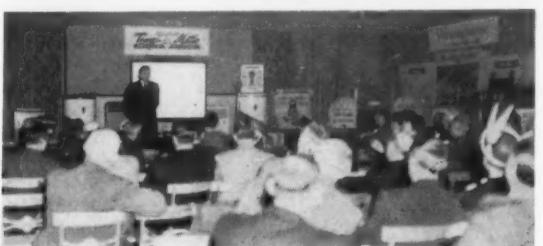
Designers and Manufacturers
of Thermostatic Expansion
Valves; Evaporator Pressure
Regulators; Solenoid Valves;
Float Valves; Float Switches.

SEE YOUR ALCO WHOLESALER





"Miss Indoor Climate" and T. H. Mabley, vice president of Tempmatic Wholesalers, Inc., test their combined "oomph" on the Westinghouse "Oompometer."



Typical of the heavy attendance of dealers, contractors, and salesmen who took in the three-day Indoor Comfort Merchandise Show staged in Detroit by Tempmatic Wholesalers with the active cooperation of 11 manufacturers is this view of the air conditioning conference, which is being addressed by J. R. Welch of the Westinghouse Sturtevant Div. by J. R. Welch, a member of the Westinghouse Sturtevant Div.

Detroit Air Conditioning Distributor Assures Big Crowd for 3-Day 'Product Show' By Lining Up Series of Technical Talks

DETROIT—What was probably the first attempt by an independent distributor of air conditioning and heating equipment in this area to stage a three-day merchandise show augmented by educational and sales promotion talks proved satisfactorily successful, believes Tempmatic Wholesalers, Inc. here.

With the aid and cooperation of all manufacturers, who set up exhibits of their products, the "Indoor Comfort Merchandise Show" held at the Fort-Shelby hotel here attracted an average of 125 to its daytime sessions, while nearly 200 were on hand for each of the three evening meetings, according to A. O. Frederick, general sales manager of the firm.

A careful check of the registration cards indicated, he said, that

several dealers came back two or three times after their initial visit, so that in all some 500 different individuals viewed the various exhibits and took in the talks and other events.

"We're very satisfied with the results of this venture," added T. H. Mabley, vice president of Tempmatic. "Just about everyone we wanted to get here showed up."

An interesting sidelight on the show was recounted by Frederick:

"A woman called up one morning and said she had read about our show in one of the daily papers. 'I want an air conditioning unit, and would you please send someone out who can sell me one.'

The firms who cooperated in the show by setting up displays of their

products that are distributed by Tempmatic included Dualtron Co.; Jackson & Church; Kent Co., Inc.; Mid-Continent Metal Products, Inc.; Queen Stove Co.; Security Mfg. Co.; Uniflow Mfg. Co.; Viking Air Conditioning Corp.; Weaver Janitrol Co.; Westinghouse; and York-Shipley.

Some of the products on display were making their first appearance before the trade.

Dualtron Co. of Pittsburgh, for example, which has been providing packaged electrostatic air filters in the smaller sizes to its local market, showed two units and announced that it is just about ready to launch a national distribution program.

Through an arrangement with Westinghouse, the firm has been packaging Precipitrons in sizes up

to 4,000 c.f.m. capacity for use with forced air heating systems and air conditioning systems up to 10 tons capacity. Also on display was a Dualtron pilot model which combines a Westinghouse Precipitron, blower, and gas or oil heating in a single package.

'CUTAWAY' CONDENSING UNIT

Featured at the Westinghouse booth itself was a 3-ton self-contained air conditioner—Model SU-31 Unitaire—and a cutaway version of a 5-hp. condensing unit.

Another new product shown for the first time was the Jackson & Church "Four-in-One Budget Furnace" designed in gas or oil-fired models.

Feature of this unit is that the cabinet, blower, and filter sections are supplied as one assembly for either gas or oil, and the same assembly can be used for four different capacities: 85,000, 100,000, 112,000, or 120,000 B.t.u. output, the company claims.

For an oil-fired model the separate "components" which would be varied to achieve the different capacities consist of the burner, combustion chamber, and oil plate.

For gas-fired jobs, the variable "components" include motor, controls, and burner. Variable speed pulleys on the main fan permit changing air delivery as required by change in capacity.

Other products on display included Superflame space heaters (Queen Stove), furnace vacuum cleaners (Kent), mechanical water softeners, "Lectrik-Ice" drinking water coolers, deepwell pumps (Uniflow), Lo-Blast gas burners in residential, commercial, and industrial sizes (Mid-Continent Metal Products), "blower package" for gravity warm air furnaces, automatic humidifiers, and window and attic exhaust fans (Viking), boilers, unit heaters, conversion burners (Weaver-Janitrol), gas-fired

hot water heaters, floor furnaces (Security), and York-Shipley's gas and oil-fired warm air furnaces, gas and oil conversion burners.

During the course of the three-day show, informal conferences of both a sales and technical nature were staged. Sound-slidefilms and movies pertaining to particular products or selling in general were also put on.

Not the least of the special features was an attractive model impersonating "Miss Indoor Climate" who pinned carnations on the lapsels of the very willing visitors.

DIFFERENT THEME EACH DAY

The climax of each day occurred in the evening following the buffet supper which was presented to all visitors.

Featured speaker at the close of the first day, designated as "Residential Heating Day," was Prof. Lorin G. Miller, dean of engineering, Michigan State college, who discussed "Warm Air Heating Today."

Chairman of this session was A. L. Bouffard, vice president, Jackson & Church.

On the second day, which was called "Architects, Engineers, and Builders Day," the speaker at the evening session was H. E. Voegeli, development engineer of the American Brass Co., discussing "Radiant Heating."

David Wepman, merchandise manager of York-Shipley Co., was chairman.

"Air Conditioning Day" was the theme of the concluding sessions, and at the evening conference chairmanned by E. C. Hach of Westinghouse, J. R. Welch of Westinghouse first outlined sales and engineering points of the Westinghouse air conditioning line, followed by George F. Taubeneck, editor and publisher of AIR CONDITIONING & REFRIGERATION NEWS, who discussed "Selling Packaged Air Conditioning."

Warm Air Unit Includes 'Precipitron'



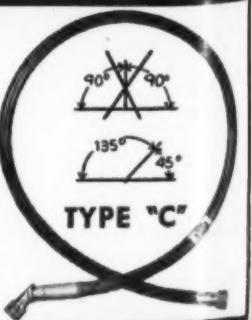
A. O. Frederick, general manager of Tempmatic Wholesalers, flicks on the switch of the pilot model Dualtron forced warm air furnace incorporating a Westinghouse Precipitron air cleaner as "Miss Indoor Climate" and W. E. Keist, Dualtron's general manager, look on.

FLEXIBLE, DOUBLE-ANGLE ACCESS, DURABLE—YET LOW PRICED!

NEW ANGLE CHARGING HOSE WITH 45° "E-Z-FLO L-BO"

- Offers two angles of approach, 45° and 135°. Easier access, less flow resistance. 36" rayon-reinforced refrigerant-resistant neoprene hose withstands pressures of 1000#/psi. 1-piece flare construction, coil spring support, fingertip "Rapid" Coupler.

Your Wholesaler has Types A & B charging hose, too!
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Complete Line of
PACKAGED
AIR CONDITIONERS
1½ to 20 Tons
and Evaporative Condensers
3 to 20 Tons

Our District Sales Managers are ready to bring you complete information—write today for prompt action.

TYphoon Air Conditioning Co., Inc.

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TRANSVERSE SECTION

So. Carolina Legislature Sees Likelihood of Passage Of Bill Requiring Air Conditioning In Textile Mills

COLUMBIA, S. C.—State Representative Eugene Neal says he believes an "air conditioning" bill has a good chance of passing this year, in view of the close (53-45) vote to kill last year's bill.

Rep. Neal is co-author of another bill regulating the ventilation, temperature, and humidity in South Carolina textile mills.

According to Rep. Neal, the bill would give an Industrial Health Board of five members the authority to order changes in ventilation, temperature, and humidity conditions in any plant after due notice and after a public hearing.

"The bill would affect any mill, factory, plant, or establishment employing 10 or more persons in the production of any textile products, by-products, or synthetic products," he said.

"Health, comfort, and safety of employees; the manufactured processes involved; the financial condition of the plant, and voluntary efforts on the part of the plants to provide healthful conditions would be factors taken into consideration in ordering any changes."

In addition to Rep. Neal, other co-authors of the bill are Rep. Matthew Poliakoff, chairman of the Spartanburg County legislative delegation; J. Reese Fant, of Anderson, and John Bolt Culbertson, of Greenville.

Representatives William Hayes, of York; John D. Long, Union; Paul McChesney, Spartanburg; Jeff Parris, Cherokee; Floyd Wright, Anderson; M. V. Horne, Richland; and John C. Williams, Spartanburg, have put their names to it also.

As previously reported in AIR CONDITIONING & REFRIGERATION NEWS, Rep. Poliakoff, Fant, and Long were authors of the so-called air conditioning bill last year. In its original form, the bill called for specific temperature and humidity requirements, but by the time it finally came to a vote, these conditions had been modified.

According to Rep. Neal, the proposed Industrial Health Board would be composed of five members, three of whom would be appointed by the governor with the advice and consent of the Senate. They would represent employees, employers, and the public, respectively. The state health officer and the commissioner of labor would be the other two members, with the latter serving as chairman.

Under the terms of the proposed bill, the commissioner of labor would have the job of enforcing any rules and regulations set up by the board to carry out the purposes of the act.

He would inspect "working conditions" in the plants and report any conditions requiring orders. The State Health Dept. would assist him and make investigations "on its own initiative" and make recommendations concerning conditions of affecting the health of laborers.

Any citizen or group of citizens could petition the board of investigations and orders. And any employee or employer would have the right to judicial review in the circuit courts.

Instruments to measure humidity and temperature would be required in the plants, where reading would be made at such locations and at such frequencies as the commissioner directed. Records of these readings would be available for inspection.

700-Ton Plant Refrigerates Concrete for Oregon Dam

SEATTLE, Wash.—Lewis Refrigeration & Supply Co., here, Pacific Northwest representative of the Frick Co., have been awarded a contract for what is described as "one of the largest and most unusual refrigeration plants of its kind."

The cooling plant having a capacity in excess of 700 tons refrigerating effect is being furnished to Consolidated Builders, Inc., of Mill City, Ore. and will be used mainly for temperature control of placed mass concrete in the construction of Detroit Dam located on the Santiam River near Detroit, Ore., according to C. I. Spoonhour, manager.

New Orleans G-E Dealer Appointed

NEW ORLEANS, La.—New Orleans' newest authorized General Electric full-line dealer is the Bangs & Sulzer Furniture Co., Inc., 822 Howard Ave.

As provided by the new bill, a detailed setting out of the factors to be considered in ordering any changes follows:

The health, comfort, and safety of employees by maintaining air free from heavy concentration of dust and lint or impurities in the air, and by providing sufficient air changes to prevent excessive temperatures and humidity.

The manufacturing process involved in the plant, or sections of the plant in question, so as to prevent a handicap of production in the said plant or plants to the detriment of employer or employees.

The financial condition of the plant in question and general economic conditions affecting the industry so that the remedial order shall not be prohibitive or impose undue hardship.

The effort of the plant in question to provide healthful conditions on its

own initiative, so that recent installations of ventilation systems shall not be declared inadequate except in cases of extreme necessity.

Hinderance or delaying of the commissioner or his representative in carrying out the purpose of the act, refusal to permit them access to the plants, failure to keep required temperature and humidity records and to make them available and discrimination against any employee who makes a complaint about condition or who testifies, or is about to testify, in any hearing involving the plant will constitute violations on the part of the employer.

The employee would be guilty of a violation of the act if he tampered with an instrument for measuring temperature and humidity or who falsifies any record of testimony.

Violations would be punishable by fines up to \$500 and imprisonment up to 60 days, or both, for each day's violation.

Dates Announced for 17th Dairy Show

ATLANTIC CITY, N. J.—Dates for the 17th Dairy Exposition to be staged here by the Dairy Industries Supply Association are Oct. 16-21, the group has announced.

Official hotel reservation forms will be issued by the DISA to its membership sometime after March 3. Under contractual arrangement hotels here will not consider reservations except on official forms and reservations should not be postmarked before March 10.

Engineering Sales Named Patterson-Kelley Agent

EAST STROUDSBURG, Pa.—Patterson-Kelley Co., Inc., here, manufacturer of heat transfer equipment for industrial use, announces the appointment of Engineering Sales Co., 171 Audubon Blvd., New Orleans, as special sales representative for its equipment for the refrigeration and air conditioning fields.

2nd Annual Southeastern Conditioning Conference Scheduled for Feb. 2-4

GAINESVILLE, Fla.—The Second Annual Air Conditioning Conference for Southeastern engineers and industrialists will be held Feb. 2-4, inclusive, at the University of Florida here.

The conference, sponsored by the university's Mechanical Engineering Department of the Engineering and Industrial Experiment Station, is another in a continuing series held by the College of Engineering.

A spokesman said that the purpose of the conference is to bring the latest developments in research and application of modern improvements for air conditioning systems to the attention of engineers from Florida and the southeast.

"The three-day meeting will feature addresses by staff members of the Mechanical Engineering Department and several air conditioning experts in the field on new techniques and applications," a spokesman for the group said.

**IT'S SELF-CONTAINED
-JUST PLUG IT IN...**

**Selb XS-4
refrigerated
FOOD DISPLAY CASE**



Full access to case is provided with easy-acting back door.

It's the famous Selb (S-4) case as a self-contained model Selb XS-4. It offers all the advantages of the S-4 plus portability, elimination of electrical and tubing installations, then too the side unit provides a cash register platform or added display space.

SPECIFICATIONS

Dimensions: Case 48" long x 30" wide (23" at top), 50" high; side unit 24" x 28" (24" at top) x 34" high. Over 22 cubic feet capacity.

Shelves: 10½" x 42½", 13½" x 42", 17" x 42". Bottom area 24" x 42".

Complete with ½ h. p. refrigeration unit ready to plug in—no special wiring or tubing installation necessary. Illuminated with cold cathode fluorescent lighting.

Construction: Rustproofed, heavy gauge, sheet steel inside and outside, gleaming white baked enamel finish trimmed with glistening chrome. Alumilite finish shelves. Display front is crystal clear, triple-paned, non-fogging, high strength glass 38½" x 38½".



Selb
MANUFACTURING CO.

1541 SALZMAN AVE. • ST. LOUIS 20, MO.

INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)

There's a Limit to Patience

Loaded down with luggage and a bulging briefcase, an excited little man rushed breathlessly into a New York airlines office.

"Has the bus for the Chicago plane left yet?" he gasped.

Interrupting the engineering feat she was performing with a lipstick, the ticket clerk regarded him coldly.

"It's out in front," she mumbled, gesturing vaguely.

He dashed outside and clambered aboard a waiting bus.

Three hours later the salesman returned, weary and spent, still lugging his luggage and briefcase.

"Please, Miss" (in tones of exaggerated patience): "I have seen the Battery, Grant's Tomb, Staten Island, the Brooklyn Bridge, Chinatown, and Harlem. The tour was educational, no doubt; but will you please help me fly to Chicago tonight?"

He Hadn't Read Nothin'

"What's your name?" asked the employment manager.

"Dewey."

"What's your first name?"

"Thomas."

"Well, well," grinned the interviewer, "that's a very well known name."

"Yep," agreed the applicant, "reckon it is. I been selling brushes in this territory for quite a few years."

And Now He's a Sales Manager

In the Good Ol' Days, when salesmen weren't petted and pampered, a traveler telephoned the home office:

"Flash floods have washed out all the bridges and airports. Am stuck here for at least two weeks. Please advise."

His boss wired back:

"Your vacation begins today."

The Customer Is Always Right

Demonstrating a vacuum cleaner to Mrs. Popofski, the salesman went into high gear.

"Now take these special attachments," he panted. "Look at this one. It kills bugs. All you do is put insect powder into this here attachment, point the nozzle at the bug, and . . ."

"Seems like a lot of bother," countered Mrs. Popofski. "Any bug what comes into this house I step on it."

Startled, the salesman mopped his brow.

"Lady," he perspired, "that's a smart trick, too. Never thought of it before."

Sadder Budweiser

Noisily opening and shutting the doors of five refrigerators on display in the showroom, a prospect did her damndest to attract the attention of the two floor men. But she couldn't compete with *The Racing Form*. Both floor men were deaf-dumb-and-blind while they figured the odds.

Into this scene burst the boss of the appliance store. He, too, had been spoiled; but he sized up the situation at a glance. In a trice he broke up the parley (parlay?) of the entranced and bemused horse players.

Pointing dramatically toward Mrs. Foozbotham he bawled out:

"Two salesmen I pay, and neither of you could take care of one lousy customer."

Lost In a Fog

Joe Poak, proprietor of the E-Z Credit Home Furnishings Shop, was luckless enough to lose his store building and most of his stock of merchandise in a disastrous fire.

At the Rotary Club luncheon two days later the boys all expressed sympathy.

"Oh, it coulda been worse," Joe answered them. "Only last week I marked down nearly everything in the store from 10% to 40%."

Pension Indicated

A salesman of our acquaintance tells us that he called at the office of a well known industry executive, and asked the latter's blonde secretary if Mr. Bigdome was "in."

The secretary looked up from her typing, cast a scathing glance at the intruder, and rasped:

"You don't hear him, do you?"

"Er . . . no."

"Then why ask me if he's in?"

Puzzler

An intinerant shoe salesman, while traveling through the Smoky Mountains, nudged a typical hill-billy who was dozing beneath a magnolia tree—his tattered straw hat shading his eyes from the sun.

"Hi-ya, Sut," greeted the salesman, pulling a pair of brown oxfords from a small suitcase. "How would you like to have these handsome shoes for your very own?"

"Shoes?" repeated the mountaineer, bewilderedly. "Whut's them things for?"

"You put your feet into them and walk around and show them off, real proud-like," explained the peddler.

"Izzat so," wondered the hill-billy, sitting upright. "Then whut happens?"

Super-Salesman Harvey

Thomas A. Edison, Henry Ford, Harvey S. Firestone, and a wealthy Seminole Indian hunting guide are involved in a story which Henry Ford II delights in telling at sales meetings.

As "Young Henry" tells it:

Edison, Ford, and Firestone were vacationing together in Florida one time when it occurred to Edison that it would be fun to discover which of his celebrated cronies was the best salesman.

After placing a few side bets, he succeeded in luring his two vacation pals into a mutual sales contest, with their Indian guide as the prospect.

Henry Ford, Sr., was the first to test his powers of persuasion. He tried to overpower the Seminole with reasons why he should purchase a new Ford. But the Indian refused to buy a car from Henry, Sr., even if it was gold-plated.

When Edison learned of Ford's failure to sell a Model T to the Indian, he advised Firestone that the contest might as well be called off.

"The Indian not only has no car, he doesn't want an automobile at any price—so how can you sell him a tire?" Edison asked, pointedly.

Firestone replied that he'd give it a whirl anyway. He did—and he sold the stubborn Seminole a brand-new Firestone tire.

Edison and Ford were confounded.

"Nothing to it," Firestone explained. "I found out that the Indian's youngest son is the apple of his eye, so I walked up to our Seminole guide and said:

"Chief, here's a grand hoop for your boy to roll. Bet he's never played with a great big rubber hoop like this!"

And the Seminole Chief bought the tire at full retail list price.

Moral: A salesman should probe the prospect's heart's-desire. Whatever you're selling, relate it to the prospect's deepest interest: his child, his home, his job, his wife, his career, or his dreams.

You Name It—I'll Sell It

Inspired by the pep talk he had just received from his sales manager, the rookie doorbell-ringer was prepared to go forth and do or die for dear old Gadget, Inc.

But when he confronted his first prospect that fine and glorious morning, he observed that the lady-of-the-house appeared to be somewhat downhearted. She'd "let herself go" (in popular parlance) and was woefully bedraggled—both in appearance and mood.

"Why so glum today?" cheered the salesman, in his most congenial manner. "Did your husband get up on the wrong side of the bed?"

"I promised my little daughter that I'd buy her a Chihuahua for Christmas," Mrs. Woe wept, "and now I find I can't get one for less than a hundred bucks. And I can't afford to spend that much at this time."

"Why, I can get you one for half that amount," the pepped-up salesman confided.

"That would be wonderful," gurgled the housewife, brightening up considerably. "When can you deliver it?"

"I'll have to phone my office and find out. May I use your phone?"

When the salesman heard his boss's voice at the other end of the line,

he triumphantly announced:

"I've made a sale already! I just sold Mrs. P. Frailey a Chihuahua for \$50."

"Er, uh, by the way," he whispered over the phone, "what in hell is a Chihuahua?"

Convention Story

Meeting for the first time at an annual convention of their trade association, a Chicago businessman and his New York counterpart took an immediate shine to each other. Both had brought their wives along to this convention, and the wives liked each other—so the two couples formed a jolly quartet every night during the shindig.

Although the New Yorker's wife was homely as sin and the Chicago delegate's mate was dazzlingly beautiful, there were no hard feelings between the two couples—and all four got on famously.

At the next annual convention, the New Yorker again brought his unglamorous wife, while the Chicagoan arrived alone. They greeted each other as long-lost brothers might, after coagulating in the hotel cocktail lounge.

"I say, old man," puzzled the New Yorker, "how come you didn't bring your gorgeous wife to our annual convention?"

"Well, I figure it this way," explained the Chicagoan: "It costs twice as much to bring her, and I wouldn't have half so much fun. How come you brought your battle-ax?"

"Oh," said the New Yorker with the homely *frau*, "it's easier to take her along than to kiss her goodbye."

In our neighborhood there is a haberdashery which advertises:

"Buy your new hat from us. We'll clean-and-block it free for two years."

Like many of my neighbors, I bought a hat from this store, and took it back for free cleaning-and-blocking. When I picked it up, I remarked to the clerk:

"This free service of yours really is a wonderful selling point. Tell me, how can your company afford it?"

Grinned the clerk: "Thanks to our complimentary cleaning service, the hats wear out much quicker."

Wrigley Analogy

Phil Wrigley, Jr., the chewing-gum magnate, engaged a young Harvard professor in conversation across a table in a Pullman dining car one evening. They traded views on Russia, Labor, the Kinsey Report, and what-not until the coffee was served—and enjoyed themselves immensely.

After quaffing appreciatively a long slug of coffee, the young college professor tried to start a dear-to-his-heart argument.

"Look, Wrigley," he expostulated, "your chewing gum is the best-known product of its kind in the world. Why do you waste money by continuing to advertise it?"

Phil Wrigley had a quick answer, but he delivered it by indirection.

"How fast did the conductor tell us this train is going?" he asked, innocently.

"About 80 miles an hour, I believe," rejoined the professor.

"Hm-m-m," observed Wrigley. "That momentum should carry us onward quite a few miles. Let's demand that the locomotive be unhooked from this train. That would save this railroad—or which I am a stockholder—a lot of money."

One Foot In the Mouth

Canvassing a list of sales prospects for home freezers, the brash young salesman pushed his foot through the door of the first house on his assigned route. The maid let him in, and called her mistress. While awaiting the descent of the Lady of the House, the salesman looked around.

A Chinese Ming vase stood proudly on the coffee table in the living room. The cold-canvasser, who had a well-developed bump of curiosity, peered inside this unusual centerpiece.

"What's that stuff inside this vase?" he asked the Lady of the House when she presented herself.

"My husband's ashes," replied the housewife.

"Oops, sorry," sympathized the salesman. "How long have you been a widow?"

"Oh, my husband isn't dead yet," explained the housewife. "He's just too damned lazy to find an ash tray."

ROOM AIR CONDITIONERS AT NEW LOW PRICES WITH EVEN HIGHER QUALITY

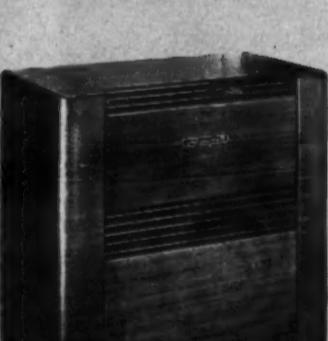
The BEDFELLOW (Model 6)

A 1/2 hp window unit with maximum cooling power of any 1/2 hp model. New hermetic compressor with 5-year warranty. Featured for bedroom cooling, for which it is ideal. Up to 6000 btu/hr. 115-60-1.



The PROFESSIONAL (Model 8)

3/4 hp window unit with maximum cooling power of any 3/4 hp model. New hermetic compressor with 5-year warranty. Featured for use in business and professional offices, as well as homes. Up to 8800 btu/hr. 115/230 volts; 50/60 cycles.



The DIRECTOR (Model 10)

1 1/4 hp console, air cooled, hand rubbed mahogany or avodire cabinets. New hermetic compressor with 5-year warranty for 220-60-1. Featured for living rooms, substantial offices, and directors' rooms. Offered with heating and cooling. Up to 11,000 btu/hr. cooling. For AC or DC. (Also in water-cooled, model 10W.)



REMINGTON AIR CONDITIONING DIVISION OF REMINGTON CORPORATION CORTLAND, N. Y. CABLES—REMINGAIR

Seeing Double? It Is Double (Capacity)



To show how modern refrigerators have gained capacity without growing larger outside, the photographer presents model Penny Karna (right) together with her "mirage" (left) at the Chicago Winter Furniture Mart. The two Kelvinators used for the "illusion" display fit into the same floor area, but the new long-door model on the right has double the capacity of the pre-war cabinet shown reflected in the "magic mirror" at the left.

Wholesalers November Sales Volume 13% Above '48 and 7% over October Total

WASHINGTON, D. C.—November sales of both wholesalers of appliances and specialties and wholesalers of commercial refrigeration equipment and parts were up 13% over November, 1948, the U. S. Bureau of the Census reported recently.

Appliance and specialties wholesalers sales for the month were 7% better than in October. For the 11 months, they were 1% under the 1948 period.

Commercial refrigeration whole-

salers reported their November sales up 1% over October but, for the 11 months period, down 6% from 1948.

Inventories of the appliance and specialties wholesalers for November were 28% below those of November, 1948, and were 2% under October totals.

For the commercial refrigeration group, inventories were 7% under November, 1948, and even with October.

SALES

Kind of Business and Geographic Division	Per Cent Change		Nov. 1949 Panel		
	Nov. 1949	Nov. 1949	No. of Firms	Dollar Values	Reported (add 000)
from Nov. 1948	from Nov. 1948	11 Mos. Reporting	1948	1949	1948
Appliances and specialties wholesalers	+13	+7	-1	106	20,779
New England	+12	+9	-6	12	1,310
Middle Atlantic	+33	+23	+6	26	9,192
East North Central	+21	+10	0	14	2,008
West North Central	-1	-3	-10	12	1,371
South Atlantic	-12	-23	-7	20	2,603
West South Central	-19	+10	-13	4	525
Mountain	-18	-2	-23	6	525
Pacific	+18	+11	+5	9	2,747
Refrigeration equipment, parts (com'l)	+13	+1	-6	27	957
Middle Atlantic	+3	-10	-6	6	215
South Atlantic	+55	+24	+2	6	300
Pacific	+7	+7	-16	5	105

INVENTORY, END-OF-MONTH (AT COST)

Kind of Business and Geographic Division	Per Cent Change		Nov. 1949 Panel		
	Nov. 1949	Nov. 1949	Reported	No. of Firms	Dollar Values
from Nov. 1948	from Nov. 1948	Reporting	(add 000)	1948	1949
Appliance and specialties wholesalers	-28	-2	82	13,365	
New England	-22	+22	10	1,030	
Middle Atlantic	-36	-6	15	3,369	
East North Central	-31	-8	10	1,177	
West North Central	-18	-2	10	1,749	
South Atlantic	-25	-7	19	2,265	
West South Central	*	*	*	*	
Mountain	-12	+6	6	962	
Pacific	-34	-5	6	1,508	
Refrigeration equipment, parts (com'l)	-7	0	20	2,117	
Middle Atlantic	*	*	*	*	
South Atlantic	+11	+3	6	610	
Pacific	-19	-5	4	312	

*Insufficient data to show separately.

International Harvester Schedules 72 Clinics To Train Dealer's Servicemen on '50 Refrigerators

CHICAGO — International Harvester dealer's servicemen go to school across the nation this month for indoctrination in servicing procedures for the new 1950 line of International Harvester refrigerators.

Instructors at each of the 72 clinics to be held in International Harvester sales office cities throughout the country are the company's district service supervisors and wholesale distributors' servicemen. These men received their training on service requirements of the new refrigerators at 11 two-day regional clinics held in December.

Because product servicing long has

been an important factor in the marketing policy of International Harvester Co., it has been felt that this aspect of the new H-74, H-84, U-87, and U-95 refrigerator models should be given especially careful attention by the company's own field organization as well as by dealers.

Every mechanical detail of the four new models came under close scrutiny at the servicing sessions, while the district men gave special attention to the exclusive Diffuse-O-Lite, Egg-O-Mat, and built-in bottle opener features, new this year with the 1950 International Harvester refrigerator line.

Solvent Safety Suggestions

Thorough, Frequent Education of Workers Seen as Key Factor In Avoiding Hazards

NEW YORK CITY—While the management or operator of a plant may provide all the mechanical safeguards and medical controls thus far developed to protect workers from the potential hazards of solvents, in the final analysis the safety of a worker depends upon his own cooperation, based upon an understanding of the reasons for the controls and his part in making them effective, according to the Safety Research Institute here. Education towards this objective should be considered as much a part of the man's training as the proper use of his tools and equipment.

The institute suggests that when a new worker is introduced to his job, his supervisor should discuss with him the solvents used, why they are used, the nature of the hazards they present, the safeguards provided to protect the employees from these hazards, and what the worker himself must do to avoid danger.

Gas masks or supplied-air respirators should be tried on and he should be given an opportunity to handle and operate the various types of fire extinguishers. He can also be given printed literature to read at his convenience or to take home, if he wishes.

At intervals, perhaps two or three times a year, "refresher" meetings should be held at which all who have occasion to work with solvents at any

time should be present. The plant safety engineer or whoever has the responsibility for plant safety could give a short talk on the subject of solvents and their proper use, followed by a question and answer period. If possible, a drill on the use of gas masks, fire extinguishers, and any other protective equipment provided for the men, should be held.

If an internal house organ is published, articles on the safe use of solvents and on gas masks, fire extinguishers, etc., can be included.

Posters on the bulletin board and placards in solvent storage and issue rooms may also be used as reminders, but these should be changed frequently.

If the number of employees who use solvents is large enough, it may be desirable to produce a set of slides.

In the very large plant, it may be possible to prepare material such as leaflets, posters, etc., in terms of the specific processes and operations employing solvents in the particular plant.

For smaller plants, much of the material already available will serve the purpose. Sources are the U. S. Department of Labor, state and municipal industrial hygiene services, the National Safety Council, the National Fire Protection Association, insurance companies, and, often, the manufacturers of the solvents and of safety equipment.

ASHVE President



Lester T. Avery, president of Avery Engineering Co., who was recently elected president of the American Society of Heating & Ventilating Engineers.

Midwest Home Show Set For Sept. 12-17 in Omaha

OMAHA, Neb.—The Midwest Home Show for 1950 will be staged in the fall to coincide with National Home Week, Sept. 12-17, instead of being held in the spring as heretofore, it is reported by John Hunt, general chairman of the show. It is sponsored by the Omaha Builders Exchange.

you pay — no premium for.. the extra advantages found in Henry products or for the extra satisfaction that follows their use

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or for the extra satisfaction that follows their use

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Piston Type For Freon

DRIER
Cartridge type with dispersion tube

A RUPTURE PLUG
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A RUPTURE PLUG
Venting To Room Atmosphere "Throw-Away" Type

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They'll Do It Every Time . . . By Jimmy Hatlo



Do You Have 'One Foot In the Door'?



MEET A BEAUTIFUL NEW MODEL! Not only beautiful, but also sensationally quiet, efficient and economical! An all-year-round asset for anybody's home or office, it's one of six new Carrier Room Air Conditioners that may be finished in any color, custom-matched to sample. Designed and built by men who know air con-

ditioning best, it leads the line to make 1950 a whale of a profitable year for Carrier dealers. Liberal mark-ups and powerful advertising and promotion complete the picture. Interested in details? Write Carrier Corporation, Syracuse, N. Y., the pioneers with world-wide experience in Air Conditioning, Refrigeration and Industrial Heating.

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City Dwellers Need Freezers More Than You May Think

If you're a dealer with a display room full of home freezers, whom are you trying to sell them to? More important, whom aren't you trying to sell them to?

Is there a group in your community that you've mentally crossed off your list? Some segment of the population that either because of income level or geographic location you've earmarked a "poor freezer prospect"? That's an easy mistake to make with such a new product, because the tendency is to consider it an appliance designed for the family with above-average earnings or the family that lives in the country.

All the rest of the people had better find something else, eh? The freezer's not for them? Let's not kid ourselves. Defeatist thinking of that kind can keep a salesroom crowded with freezers instead of eager, curious prospects. And it can kill a dealer's spirit before he's made half a try.

With the salesman the big job is to sell himself on the idea that **EVERYBODY** needs the home freezer—even folks who live in congested residential districts. Even those whose take-home pay is average or below that.

Review that last argument, for instance. It's the basis of the "we-can't-afford-it" reasoning which discourages many dealers from ringing doorbells in certain sections of their franchise area. The big trouble is that too many salesmen are too willing to accept such an attitude without question.

After all, the lower the income of a family, *the less its members can afford to live without a freezer*. Higher-earning groups don't miss the food they throw in the garbage pail half so much as those in the lower brackets. By helping people save leftovers, buy at bargain prices, utilize garden surpluses, the freezer proves its indispensability.

The economies wage-earners can achieve will enable them to enjoy luxuries they might otherwise have to forego. The prospect who thinks he can't afford a low-temperature cabinet actually can't afford NOT to own one. It takes a salesman to point this out and make it stick.

Comes the question: What about the people who live in the city? In other words, what good is a freezer to somebody who can run down to the corner food store any time he wants?

A poser like that presumes that the urban dweller leads such a convenient life that you can't possibly sell him another convenience. Everything's at his fingertips now, so the home freezer won't be necessary, thank you. Are you sure? Those trips to the corner store aren't so convenient as they look.

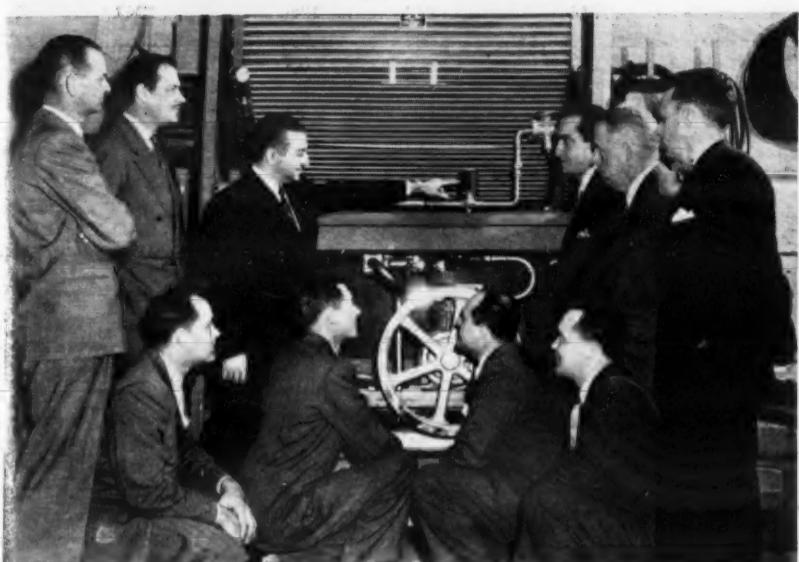
To supply day-to-day needs and pick up forgotten items, the average metropolitan family must make hundreds of trips to the grocer every year. Polling freezer users, a home economist for one large manufacturer found that this single appliance saved metropolitan families an average of three trips a week to the store. Everyday necessities like bread and cake are handy to have around *frozen-fresh* for emergencies, no matter where you live.

And here's a twist: one homemaker cooked large quantities of food on gloomy days and then stored this surplus in her freezer so that fair-weather days could be reserved for special visiting or trips to the beach and the park. That's the kind of convenience city folks understand. A smart salesman will make sure they do.

Aside from increased comfort, the economies an urban resident can effect from owning a home freezer are big enough to shout about. A recent survey of metropolitan families indicates that they save over \$12 per month in this manner. Mind you, that's only \$1-a-week less than the average freezer equipped farm family is able to save these days!

Convenience and savings already have sold the home freezer to the better-income and rural areas. And they'll go to work for the city-market, factory-district dealer—if he'll let 'em.

People and Products In the NEWS



PRE-SEASON BRIEFING: A group of district managers for Typhoon Air Conditioning Co. gather in the firm's New York office for intensive briefing on the 1950 season. Chief Engineer Murray Kabil points out the features of the new Typhoon 20-ton unit, while Sales Manager Don V. Petrone (third from right, standing) emphasizes sales angles. Others are: (left to right standing): Joe Brister, Dan Dailey, P. E. Carter, and R. B. Cherry, Jr. Kneeling are: Art Farr, Hamilton Gray, Frank Klein, and Norman Powers.



JUST A MINUTE: A miniature "dream kitchen" that could be photographed and mounted in a folder in just 60 seconds was shown at the Hotpoint kitchen planning center during the American Furniture Mart. T. F. Beekman points out the finished photograph. Camera mounted on planning counter quickly records any desired arrangement of appliances.



NEW ADDITION: Philco has added model EH-121 to its line of home freezers. This 12-cu. ft. freezer features the sloping front, interior light built into the lid, three low-temp compartments, and a plastic utility tray which serves as a temporary shelf.



BUYERS' CONCLAVE: (Left to right) James Julian and J. B. Ogden of the J. L. Hudson Co., Detroit, with D. A. Packard, Kelvinator household sales manager, John Young, Kelvinator metropolitan markets manager, and Irving Woods of A. M. C., New York City, at Kelvinator's display during the recent American Furniture Mart.

Hilsch Experiment a Puzzler

Group Questions Mathematical Formula on Vortex Tube

CHICAGO—Still trying to figure out exactly why a Hilsch vortex tube will separate a jet of compressed air into two streams, one hot and the other cold, research men were highly skeptical of a mathematical explanation of the phenomenon which was presented before them at the forty-fifth annual meeting of the American Society of Refrigerating Engineers here.

All agreed with the statement, "great interest was stirred up by the account of the Hilsch tube when it was published in 1946," which was made by D. S. Webster of the engineering research laboratory of E. I. du Pont de Nemours & Co., Inc., but they did not agree with his attempts to explain the "how come" of the tube.

He had emphasized, however, that this had been merely a "high spot investigation, and not a true research project," which was aiming as much at stimulating further studies as offering an explanation of the tube.

The vortex tube, as Webster pointed out, was developed in Germany by Dr. Hilsch, and was discovered in his laboratory in July of 1945 by an American investigation group following the cessation of hostilities in the European theater of the war.

HOW VORTEX IS FORMED

What happens in the Hilsch tube, of course, is well known by now, but why it happens is something else again. A jet of compressed air enters

the tube tangentially beneath the step of a single spiral turn, creating a rotating mass of air—a vortex.

On one side of the tee-shaped device, the i.d. is the full diameter of the vortex, and through this side passes hot air coming from the circumference of the vortex.

The other side of the "tee" is restricted and through a small hole cold air leaves the center of the vortex, provided back pressure is maintained on the hot air side of the device.

Why?

Webster's explanation, which he works out in a series of 33 equations, can be simplified to its barest essentials as follows:

The work done by the whirling air mass in opposing the tangential forces of the wall of the tube combined with a recoil force removes the heat from the molecules at the center of the mass, the heated air at the outer edge of the mass passing out the hot air tube, while the consequently cooled air at the center is forced through the small center opening of the other tube.

"One fact is noticeable," Webster said. "Heat given up by the cold stream appears in the hot stream."

"Expanding air in the stream doesn't transfer energy, but expansion sideways does do some work. There's also a recoil force as the gas expands inward, as well as a tangential force."

Further emphasized by Webster was the fact that the present practical applications of the Hilsch tube

are limited by its extremely low coefficient of performance.

Figured as the ratio of energy expended to heat extracted, the Hilsch tube had a performance coefficient of 0.11 (a c.o.p. of 0.22 was indicated in some of Dr. Hilsch's own data), as compared with a c.o.p. of around 4 for a domestic refrigerator using "Freon," according to Webster.

IS VELOCITY CONSTANT?

Little objection was raised to such points as the above, most of the criticism instead being directed at a major premise made by Webster for his mathematical explanations, that is, the assumption that the whirling mass of air had a "constant angular velocity."

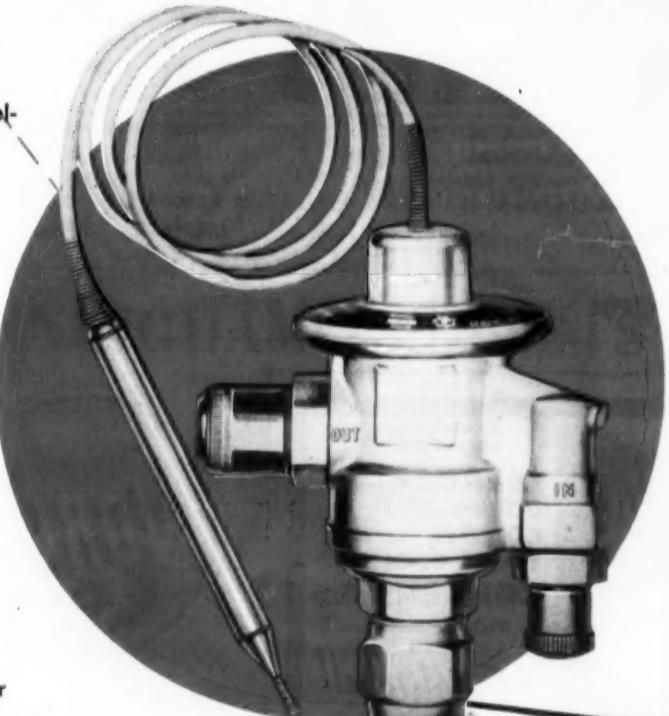
Four engineers objected to this assumption, pointing out such factors as the failure to consider any "viscous effect."

A surprise note was added when Dr. Alexander Goetz revealed that "Hilsch was my student 20 years ago in Germany." He added:

"The properties of the tube probably are not subject to a mathematical approach. . . . Every molecule has a different temperature, and apparently this tube separates the hot molecules from the cold molecules."

He also commented that "while the efficiency of the device is extremely low, the production of low temperatures (-100° F. or below) involves very complicated equipment. Hilsch suggests an approach to this problem."

Thousands of Service Engineers everywhere will welcome the news that the AP Model 207 now has increased capacity from a half-ton to one-ton Freon. The Model 207 is probably the most widely-used Thermostatic Expansion Valve in the industry and the most popular for all those many half-ton units, from low temperature freezers to air conditioners. The new ONE-TON capacity makes it even more versatile, bringing you typical 207 advantages of small compact body size, liquid charged power element, straightline superheat, supersensitivity, into your larger units — at minimum price. Like all the other AP Valves, the larger capacity Model 207 can be installed in any position or ambient temperature, and used at all temperatures without adjustment or changing of parts. . . . Now, on your larger one-ton systems, too, enjoy the benefits of the new larger AP Model 207 Thermostatic Expansion Valve. Your Wholesaler has it in his stock now! Ask him for several valves or write for bulletin



A-P Model 207
Now Covers Complete Capacity Range
Available in four orifice sizes: .028, .035, .045 and .062; with rated commercial capacities of .31, .44, .70 and 1.02 tons Freon 12.



AUTOMATIC PRODUCTS COMPANY

2450 North Thirty-Second Street, Milwaukee 10, Wisconsin
Export Dept. 13 East 40th St., New York 16, N.Y.

DEPENDABLE Refrigeration Valves

STOCKED AND SOLD BY GOOD REFRIGERATION WHOLESALERS EVERYWHERE . . .
RECOMMENDED AND INSTALLED BY LEADING REFRIGERATION SERVICE ENGINEERS

2-Year Pattern of Equipment Sales In 22 Areas of World Trade

	Lebanon		Iraq		Iran		Palestine (Israel)		Kuwait		Saudi Arabia	
	1947	1948	1947	1948	1947	1948	1947	1948	1947	1948	1947	1948
Electric household refrigerators.....	See Syria	347,000	61,000	194,000	93,000	260,000	126,000	282,000	6,000	19,000	111,000	140,000
Electric household refrigerator parts.	"	18,000	11,000	15,000	10,000	11,000	57,000	22,000	3,000	7,000	41,000	26,000
Compressors and cond. units (com'l)												
½ hp. through 3 hp.....	"	63,000	4,000	4,000	1,000	...	84,000	42,000	...	9,000	5,000	23,000
Over 3 hp. through 10 hp.....	"	10,000	...	1,000	...	...	19,000	4,000	...	2,000	3,000	17,000
Over 10 hp.....	"	26,000	...	15,000	110,000	...	18,000	1,000	...	...	56,000	41,000
Centrifugal refrigerating units*	"	...	...	...	...	...	3,000	...	...	...	32,000	...
Evaporative condensers	"	8,000	...	15,000	...	...	9,000	23,000	...	...	...	23,000
Condensers except evaporative	"	1,000	...	...	...	...	5,000	...	...	...	...	...
Heat transfer equipment	"	4,000	...	2,000	...	...	11,000	7,000	...	...	19,000	39,000
Ice making equipment	"	15,000	54,000	44,000	2,000	...	9,000	...	56,000	53,000	49,000	63,000
Air diffuser units	"	9,000	1,000	...	...	...	7,000	4,000	...	4,000	...	5,000
Self-contained com'l refrig. equip.	"	96,000	95,000	41,000	23,000	14,000	89,000	26,000	21,000	71,000	232,000	197,000
Liquid coolers	"	...	...	...	...	...	3,000	...	1,000	40,000	...	167,000
Self-contained air conditioners												
Under 2 tons	"	32,000	42,000	51,000	49,000	68,000	9,000	9,000	2,000	46,000	116,000	274,000
2 tons and over	"	17,000	11,000	21,000	1,000	182,000	15,000	2,000	...	132,000	40,000	119,000
Mechanical com'l refrigerators	"	29,000	...	...	...	...	29,000	...	...	14,000	48,000	74,000
Auxiliary equipment	"	24,000	26,000	24,000	118,000	14,000	87,000	85,000	12,000	44,000	236,000	265,000
Parts for foreign assembly	"	3,000	...	...	...	71,000	5,000	...	...	29,000	35,000	52,000
Replacement parts	"	2,000	11,000	16,000	2,000	8,000	16,000	9,000	2,000	13,000	66,000	123,000
Total	See Syria	704,000	316,000	443,000	409,000	628,000	601,000	516,000	103,000	483,000	1,089,000	1,648,000

	Bahrain		India		Pakistan		Ceylon		Burma		Siam	
	1947	1948	1947	1948	1947	1948	1947	1948	1947	1948	1947	1948
Electric household refrigerators.....	17,000	43,000	930,000	76,000	See India	46,000	88,000	36,000	53,000	12,000	67,000	87,000
Electric household refrigerator parts.	3,000	2,000	188,000	93,000	"	5,000	10,000	11,000	6,000	1,000	8,000	15,000
Compressors and cond. units (com'l)												
½ hp. through 3 hp.....	1,000	1,000	279,000	433,000	"	4,000	2,000	10,000	...	...	...	3,000
Over 3 hp. through 10 hp.....	...	3,000	100,000	124,000	"	...	1,000	...	5,000	...	...	...
Over 10 hp.....	...	2,000	223,000	247,000	"	1,000	...	3,000	...	...	10,000	2,000
Centrifugal refrigerating units*	...	...	44,000	27,000	"	...	...	...	...	...	...	...
Evaporative condensers	...	...	38,000	34,000	"	2,000	...	11,000	...	...	...	2,000
Condensers except evaporative	...	...	21,000	9,000	"	1,000	...	...	...	...	...	...
Heat transfer equipment	...	...	28,000	186,000	"	...	2,000	...	...	...	6,000	...
Ice making equipment	...	3,000	481,000	1,001,000	"	6,000	1,000	...	71,000	...	108,000	134,000
Air diffuser units	...	1,000	91,000	60,000	"	...	...	...	...	...	...	...
Self-contained com'l refrig. equip.	8,000	10,000	393,000	174,000	"	4,000	3,000	3,000	14,000	...	11,000	11,000
Liquid coolers	...	61,000	9,000	36,000	"	...	...	...	...	...	...	...
Self-contained air conditioners												
Under 2 tons	12,000	127,000	1,108,000	260,000	"	...	4,000	...	2,000	...	3,000	6,000
2 tons and over .....	...	21,000	326,000	333,000	"	1,000	...	...	...	...	...	...
Mechanical com'l refrigerators	9,000	7,000	24,000	62,000	"	...	...	...	...	...	8,000	...
Auxiliary equipment	9,000	65,000	507,000	726,000	"	4,000	2,000	22,000	2,000	3,000	1,000	5,000
Parts for foreign assembly	...	...	19,000	187,000	"	...	...	...	...	...	...	1,000
Replacement parts	1,000	18,000	206,000	155,000	"	2,000	7,000	3,000	1,000	1,000	...	4,000
Total	60,000	364,000	5,013,000	4,203,000	See India	76,000	120,000	99,000	154,000	17,000	222,000	270,000

	French Indo-China		British Malay		Neth. East Indies (Indonesia)		Philippines		China		Hong Kong	
	1947	1948	1947	1948	1947	1948	1947	1948	1947	1948	1947	1948
Electric household refrigerators.....	127,000	145,000	559,000	902,000	29,000	92,000	927,000	1,187,000	589,000	79,000	392,000	403,000
Electric household refrigerator parts.	4,000	13,000	36,000	56,000	8,000	17,000	90,000	95,000	16,000	18,000	28,000	53,000
Compressors and cond. units (com'l)												
½ hp. through 3 hp.....	1,000	4,000	19,000	23,000	...	3,000	92,000	54,000	14,000	34,000	10,000	28,000
Over 3 hp. through 10 hp.....	1,000	2,000	1,000	11,000	...	2,000	10,000	43,000	3,000	7,000	7,000	5,000

Reports Indicate 18.5% Of Chain Stores Have Installed Conditioning

NEW YORK CITY—The nation's chains spent \$31,000,000 for air conditioning equipment in 1949, *Chain Store Age* magazine has reported.

Reports from 517 chains operating 2,729 stores, or about 24% of all chain stores in the nation, provided the information on which the publication's study was based. Air condition equipment is in operation in 1 1/2% of all chain stores, the magazine said.

Variety-general merchandise chains in 1949 spent \$9,000,000 for air conditioning equipment, and 23% of their stores are now air conditioned, the publication reported. Restaurant chains expended \$5,500,000 and 42% of their stores are now air conditioned, it was found.

Dollar expenditures and the percentages of stores now air conditioned by chains in other fields, as reported by the publication, are: apparel, \$4,900,000 and 53%; grocery, \$3,000,000 and 4%; shoe, \$1,600,000 and 54%; drug, \$1,000,000 and 55%; auto accessories-hardware, \$1,000,000 and 9%; and other chains, \$5,000,000 and 15%.

The \$3,000,000 spent in 1949 by the grocery chains is especially significant, *Chain Store Age* pointed out, because these chains began to recognize the need for air conditioning only within the past few years.

Frigidaire Names Tenn. Dealer

KNOXVILLE, Tenn.—Home Furniture Co., 208 W. Vine, has just been appointed a franchised Frigidaire dealer, according to Carl Fielden, Jr., president of the firm.

N.Y. Frozen Food Dealer Offers Special-Cut Wholesale Meat

BUFFALO—The Erie Wholesale, 11 Alamo Place, frozen food dealer, is attracting business in wholesale meats with newspaper advertising pointing out it will stock home freezers with all kinds of meat and poultry at wholesale prices.

"Attention home freezer owners," says newspaper advertising. "Let us stock your freezer at wholesale prices. Order your cut of beef, pork, lamb, veal, or poultry. Our experts will cut it into roasts, steaks, or chops without additional charge. Also complete line of frozen foods. Call personally or phone."

Gaylord Appointed Sales Mgr.

GRAND RAPIDS, Mich.—Sherwood B. Gaylord has been named general sales manager of Clement Electric Co. here. An electrical engineer, he was formerly with General Electric and worked at the atomic project at Oak Ridge, Tenn.

Low-Temp Warehouse Will Give Farmers Extra Space For Storing Bumper Crops

MARIONVILLE, Mo.—The Marionville Refrigerating Co. here is finishing construction of a huge new low-temperature storage building near its storage and sharp-freeze plant, which will be leased to outside operators, according to the management.

Designed to give local farmers and producers adequate storage space for bumper crops, the new storage building is of steel and reinforced concrete, with two floors 79 by 90 ft. and a third floor 36 by 36 ft. Twenty tons of refrigeration capacity will maintain temperatures of 10° below zero, with a standby unit.

One half of the building has been leased to the Continent Frozen Foods Co. of Missouri, to operate an egg processing plant, with from 100 to 125 persons on the payroll. Another food producing firm will shortly lease the remaining half, it was announced.

Eventual Bid for National Market Seen as Servel Begins Output of Smaller Absorption Air Coolers

(Concluded from page 1)
ideally adapted to even the smallest homes. Conversely, our units may be installed on multiple basis and will accommodate large loads."

In discussing the company's air conditioning program, W. Paul Jones, recently-elected president of Servel, claimed that complete year-round air conditioning is the most significant advance in better housing during the present century.

"Like all other major developments, early manufacturing of these pioneering devices necessarily is limited," Jones said. "Consequently, their prices are high. Fortunately, we are now in sight of the mass production which will make air conditioning possible to people in almost all income brackets.

"Our own progress is being hastened by the expanded availability of natural gas. America's reserves of natural gas have been materially increased in the past decade and pipeline construction completed and planned will soon make available the

advantages of air conditioning to more and more American cities and towns. Liquified petroleum in suburban and rural areas makes air conditioning possible in even more places."

All this means that Servel is flirting with a national market. Until recently no vigorous sales effort has been made in areas served by about 60% of the nation's gas meters—because restrictions on the use of gas for home heating (where demand exceeded supply) were applied in those areas.

Servel's new air conditioners can be operated on gas or steam. The latter are installed largely in major cities where its use in many cases is more economical.

Servel's air conditioner is promoted locally by utilities which are interested in its year-round load-building possibilities. During the summer, for instance, a gas-fired air conditioner uses twice as much gas as the range, refrigerator, and water heater combined. Combination utilities which sell both gas and electricity find that air conditioning loads iron out seasonal peaks. In most localities gas consumption is at its lowest point in summer, while electric current frequently is carrying its peak load.

Servel air conditioner sales showed a 20% increase during the past year, the greatest percentage increase in the industry, it is believed.

Until now, the major share of the market has been new homes and other buildings. With the cooling unit being sold separately for the first time, the market potential for existing building already supplied with heating apparatus is greatly increased, Jones feels. More than 16 years of engineering work have gone into the Servel air conditioner at a cost of \$5,000,000.

"Once the complete 'All-Year'

Motor-Base Adapters

Motor adapters make possible perfect belt lineup. The use of longer or shorter belts, long or short rotor shafts, 100 per cent universal.

SERVICEMEN SEE YOUR JOBBER

Motor Adapter Corporation
4730 JOY ROAD
DETROIT 4, MICHIGAN

Now made commercially in California by methods worked out in Bureau laboratories, the purees are cited in the report as food products of increasing interest to bakers, dairies, and beverage manufacturers.

They promise to join frozen concentrated orange juice, an earlier development of cooperative research by the Florida citrus industry and the Bureau, as successful new outlets for the nation's citrus crop, it was said.

Once the complete 'All-Year'

Study Cites Research In Frozen Citrus Purees

WASHINGTON, D. C.—Research achievements described by the U. S. Department of Agriculture's Bureau of Agricultural and Industrial Chemistry in its recently-released annual report include frozen orange and lemon purees.

Now made commercially in California by methods worked out in Bureau laboratories, the purees are cited in the report as food products of increasing interest to bakers, dairies, and beverage manufacturers.

They promise to join frozen concentrated orange juice, an earlier development of cooperative research by the Florida citrus industry and the Bureau, as successful new outlets for the nation's citrus crop, it was said.

Once the complete 'All-Year'

Eastern Storage Plant Is Destroyed by Blaze

CLYDE, N. Y.—A large Grange League Federation cold storage warehouse was destroyed by fire recently, causing many farmers to lose their entire year's fruit crop.

High winds were blamed for toppling an electrical transformer which touched off the blaze.

Besides destroying large quantities of stored fruit, the fire also demolished stores of eggs for distribution to grocery stores in the vicinity.

Frozen food supplies which hundreds of families had stored in rented locker space also were lost.

30 Years' Reputation for Dependability



General Refrigeration Division
YATES-AMERICAN MACHINE CO., Beloit, Wisconsin

Carter Heads Sales for Lingle Refrigerator Co.

KANSAS CITY, Mo.—Oliver S. Carter, formerly with the Frigidaire Sales Corp., has been appointed general sales manager of the Lingle Refrigerator Co., Inc. here by C. M. Lingle, president.

Carter had been with Frigidaire for three years and, for two years prior to that, had been connected with the Superior Refrigeration Supply. From 1933 to 1944 he had been in the refrigeration service and installation business here.

Reefers Rebuilt by Pa. Firm

GREENVILLE, Pa.—Northwestern Refrigeration Line Co. of Chicago has awarded a contract to the Greenville Steel Car Co. here to rebuild 125 refrigeration cars.

'Stratocruiser' Cooling Systems Change Air 15 Times an Hour

CHICAGO—Air conditioning plants to keep temperatures at exact comfort levels have been installed in United Air Lines' new Mainliner Stratocruisers, which recently began operating on the California-Hawaii route.

Two air processing plants—combustion heaters and a refrigeration unit cope with temperatures ranging from -60° F. to 100° F.

Every four minutes the cabin air of Mainliner Stratocruisers is fully replenished with fresh air. This, after being heated or cooled, is radiated through thin ceiling fabric and louvers on the upper window line, then sucked out through floor-level wall grilles.

Each of the 55 passengers is provided with 60 cu. ft. of clean, processed air every minute. The system is automatic.

The 71-ton luxury airliners are most efficient at high altitudes, 15,000 ft. and up, where outside temperatures generally are low. But on the ground and while climbing the weather often is warm—hence the need for both heating and cooling systems.

Servicemen!

FOR MAXIMUM EFFICIENCY USE

CHICAGO SEALS AND VALVE PLATES



Precision lapping, superior construction and simple installation make Chicago seals ideal for replacement.



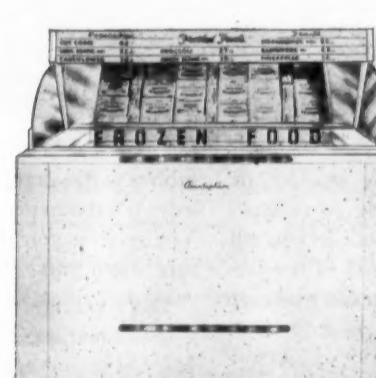
Only Chicago valve plates have replaceable seats. Replacements for over 340 compressor models.

CHICAGO SEAL CO.
332 S. HOYNE AVE. CHICAGO 22, ILL.

Your New Year's Resolution

should include

CUNNINGHAM CABINETS



Many dealers realized tremendously increased profits in 1949 with and because of Cunningham low temperature cabinets for frozen food and ice cream. High temperature cabinets for dairy products. In 1950 you too can have such an experience. For all details write

CUNNINGHAM PRODUCTS COMPANY

8790 Grinnell

Detroit 13, Michigan

REFRIGERATOR BARGAINS! NEW GENERAL ELECTRIC COMMERCIAL REFRIGERATORS

1/4 to 1/3 OFF!

We can now offer you a limited quantity only of G-E commercial refrigerators at 1/4 to 1/3 off former dealer costs. These self-contained models are brand-new...complete...in original crates...backed by full 1-year G-E warranties!

You can sell these attractive, top-quality units at a sensationally low price—yet still maintain a high profit margin. Restaurants, taverns, schools, hotels, institutions, churches—all go for these outstanding values.

We guarantee all equipment to be exactly as represented in G-E literature—or no sale. Each unit supplied with a complete set of sales-aiding mats and folders.

Take a look at these amazing values. Then act fast. Write, wire or phone today!

No.	Avail-able	Model	Former Dealer Cost	Price FOB St. Louis
15	HC116M	15.6 cu. ft. Ice Maker.	\$427.80	\$313.00
12	HC125M	22.6 cu. ft. Ice Maker.	482.40	340.50
9	HC125S	22.1 cu. ft. Blower Coil.	465.60	302.00

RAMSEY-BENNETT CO.
430 HURON ROAD • TEL. Tower 1-6070
CLEVELAND 15, OHIO

WE BUY AND SELL MANUFACTURERS' SURPLUS STOCKS

Refrigeration Problems and their Solution

by Paul Reed

For Service and Installation Engineers



Paul Reed

Case of The 'Bad Methyl'

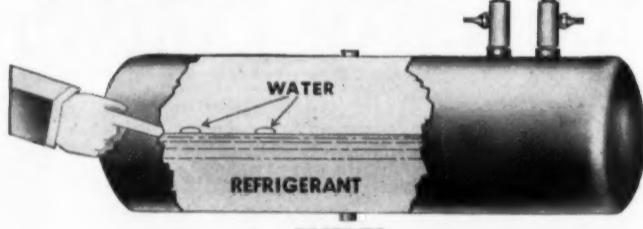
Just 20 years ago, a manufacturer of household, commercial, and air conditioning refrigerating equipment, got a complaint from its distributor in New Orleans, of "bad methyl chloride." This manufacturer's equipment was designed for use with methyl chloride. "Freon" was just being introduced. It had been announced but was not generally available. Practically all of the methyl chloride at that time, was made by Roessler & Hasslacher Chemical Co., later bought out by du Pont and absorbed into its vast enterprises as their "R & H Div."

FACTORY SUPPLIED EVERYTHING

Twenty years ago, it was customary for manufacturers of refrigeration equipment to furnish refrigerants, oil, tubing, fittings, tools, expansion valves, controls of all kinds and in fact, practically everything the distributor needed in the way of installation and service material and accessories. Refrigeration supply jobbers, or wholesalers, as they later came to be known, were just starting to spring up here and there, but distributors and dealers had to look to the equipment manufacturer for practically all of the material they needed. It was literally true that there was almost no one else from whom to get it. Methyl chloride could be bought direct from R & H, but most distributors and dealers just bought it from the equipment manufacturer.

So when the service manager of this manufacturer got the complaint of "bad methyl," he was very much interested in checking into it. Not only did it involve the purity of the methyl from R & H, who was his sole supplier, but he, the service manager, had sold and shipped this methyl out of his own stock, so he was even more directly interested.

JUST ONE WAY TO REACH THIS WATER



RECEIVER

Water trapped in the receiver, or anywhere else, can only be reached with a liquid drier. How can you tell whether water is trapped in the system? You can't. So you can't be sure you're reaching all the moisture unless you use a liquid drier... Thawzone.

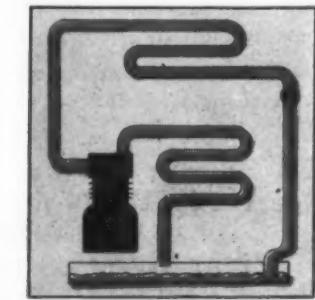
Wherever moisture goes, Thawzone goes, too. It reaches the expansion valve, the receiver, the coil, the

tubing walls, both highside and low-side. What other method can do that? You're sure you've found the moisture when you use Thawzone.

Did you know that only Thawzone actually eliminates water permanently? Other methods hold water and sometimes release it later. The water removed by Thawzone cannot possibly return. Fewer callbacks for you.

Use Thawzone in "Freons", methyl chloride, "Carrene" or isobutane. 1 teaspoonful ($\frac{1}{2}$ oz.) per pound of refrigerant. Use half as much in hermetic units. Highside Chemicals Co., Colfax Ave., Clifton, N. J.

THAWZONE®
LIQUID DEHYDRANT...
reaches all the moisture



GOES WHEREVER WATER GOES

ACME PRODUCTS

Serving THE REFRIGERATION INDUSTRY Since 1919

Specify Acme For Top Performance

FREON SHELL AND TUBE CONDENSERS
DRY-EX WATER CHILLERS
HI-PEAK WATER COOLERS

FREON SHELL AND COIL CONDENSERS
HEAT EXCHANGERS OIL SEPARATORS

INDUCED DRAFT COOLING TOWERS*
EVAPORATIVE CONDENSERS
LIQUID RECEIVERS

BLO-COLD INDUSTRIAL UNIT COOLERS
PIPE AND FIN COILS

AMMONIA CONDENSERS

*A new Acme product with outstanding features. Write for Catalog No. 40

Will be free catalog on any of the above items

ACME INDUSTRIES Inc.
JACKSON & MICHIGAN
Representatives in principal cities

some, at least, of the trouble from "bad methyl" had shown up.

Wright worked with the shop man and before quitting time they had the job all cleaned out, re-assembled, with the factory oil, and a fresh charge of methyl.

JOB OK NEXT MORNING

Next morning, bright and early, Wright checked the job. It was running fine, no indication of tightness—no trouble. So he got the service manager and showed him. They took the compressor off and the oil was as clean as new.

So Wright had no difficulty in getting them to get rid of their non-factory oil nor to get a wire order off to the factory for 5 gals. of factory oil by express—rush! As soon as it came in, they were to take out the six or eight jobs that were giving trouble, clean them all out, rebuild the compressors and float valve, put in new factory oil, and recharge them with new methyl.

Wright had a trip over to Mobile but he promised the distributor that he would be back in a couple of days. By that time the factory oil should be in, and one of the jobs could be pulled out, cleaned up, and charged over to the new oil and refrigerant.

So a couple of days later he got back about 4 p.m. The oil was in. One job had been reworked and was just being finished. He went out, and by 5 o'clock the job was running.

A TWO-TEMPERATURE JOB

It consisted of a 12-ft. case and an ice cube freezer on a $\frac{1}{2}$ -hp. machine. There was a pressure actuated two-temperature valve in the suction line to the case that cut off the case and left the condensing unit on the ice cube freezer only. This was somewhat unbalanced, but it gave fast ice cube freezing.

The two-temperature valve was adjustable as to its cut-in and cut-out pressures and had snap action—just what was needed. It did not come from Wright's factory. He had never seen one like it.

Wright felt fine. He had solved the case, he had got the distributor out of trouble and made the customer happy. That night he had a big pompano dinner with all the fixin's at Antoine's, wrote his report in to the factory and felt real satisfied.

The next morning, just as a matter of routine, he and the service manager went out to check up. The job was down! The compressor was stuck, the same as before.

We pause in sympathy with Wright, who between sobs and curses is desperately trying to determine what under the sun could be the trouble. He starts to disconnect the compressor, so as to open it up and see what it looks like inside, and when he pulls off the discharge service valve, it came to him with a flash what the answer was.

Can you guess? Answer next week.

AVOID BOTTLE COOLING "BOTTLENECKS!"

United

**DRY-KOOL
BOTTLE COOLER**

You eliminate slippery wet bottles with a United Dry-Kool. This fine bottle cooler features quick EVEN cooling, clean DRY handling and United's exclusive "Lift-A-Way" doors. Manufactured in 4, 6, 8 and 10 foot sizes, the Dry-Kool can be had with either detached or self-contained refrigerating unit.

NO WASTE SPACE

United Dry-Kool bottle cooler efficiently swallows case after case in its roomy, well-planned interior.

Domestic Gas Research Groups To Be Combined To Provide Broader Study

NEW YORK CITY—R. J. Rutherford, chairman, Committee on Domestic Gas Research, American Gas Association, has announced that the three technical advisory groups of the association's research committee that are concerned with gas house heating and air conditioning will be consolidated effective Feb. 1.

The three groups are central space heating, direct space heating, and summer air conditioning.

The consolidation of these technical advisory groups which are composed of gas company engineers and engineers from without the industry, will provide a broader consideration of research problems in the heating and air conditioning field, it was pointed out. Each problem now can be dealt with in the light of different possible methods of accomplishing the end result of most value to the industry.

One of the active research projects that will be supervised by the new technical advisory group during 1950 covers improvements in air distribution systems for all year air conditioning.

Electric Wholesalers November Volume Drops 31% from '48

WASHINGTON, D. C.—November sales of electrical goods wholesalers dropped 13% from November, 1948, but were about the same as in October, 1949, the Census Bureau reports.

For the first eleven months of 1949, sales were down 8% as compared with the same period of the previous year.

Inventories of appliance and specialties wholesalers were 2% less at the end of November, 1949, than at the end of October, 1949, and were 28% under the level of November, 1948.

Memphis Dealers Install Akers as New President

MEMPHIS, Tenn.—C. D. Akers, Jr., vice president of Akers & Sons Hardware & Furniture Co., has been installed as the new president of the Memphis Retail Appliance Dealers Association. He succeeds William R. Jenkins of Jenkins-Leach, Inc.

Other officers are J. H. Morris, vice president; Charles Hendricks, secretary; and Ben Gruber, treasurer. New directors are L. E. Gatlin, Sam Hollis, Sr., George Bates, James Archard, Roy Sanford, J. B. Whitten, and William Wolf.

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UNITED REFRIGERATOR COMPANY
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Avoid Complacency In Temporary Sellers' Market, Continue Building Sales Power, Nance Advises

By James J. Nance, President, Hotpoint, Inc.

What is the situation in the electrical appliance industry? Perhaps, I can summarize most briefly by saying it is the reverse of a year ago.

At that time inventories were beginning to pile up, there had been a succession of price advances in the postwar boom which was based on pent-up demand, salesmanship in the industry was almost a lost art, and customers were beginning to back away. In short, an adjustment was due.

You men know what happened. The appliance business went to hell in April and May just when it should have been reaching its seasonal peak.

The industry countered with probably the fastest adjustment in its history. Prices were reduced, advertising was resumed on a scale intended to sell goods, and production was cut back to await the cleaning up of stocks.

The recovery, like the readjustment, was the fastest in appliance history. By July buying was coming back; in August goods were moving briskly; and in September manufacturers of leading brands were on a back-order basis.

Cost of Steel Strike

Then came the steel strike, which cost the industry from four to six weeks of production. Best estimates now indicate that it will be the end of this quarter before the steel mills can produce enough to bring inventories through the channels up to manufacturers into a reasonably comfortable position.

In appliances, as you know, the normal pattern calls for very heavy production in the first quarter of the year to stock up for the peak selling season of the second quarter.

With inventories in the distribution system cleaned out, and with the prospect that the steel situation will be touch and go until the end of March, I don't see how the industry, even going full blast, will be able to build up inventories to a comfortable level until late spring at least. Even then there may not be much of a chance for a significant letdown.

An important new element in the appliance business has been the vigor of sales during the summer months, compared with the sharp slump that was always seasonable pre-war.

Some Things Not So Rosy

Everything I have said up to this point is optimistic. However, it happens that there are some things to be said—important things—that aren't quite so rosy.

During the three-year postwar boom most of us foresaw that there would be a readjustment such as occurred last Spring when the wants that had accumulated during the war were satisfied and supply and demand came into balance. I believed that when that day arrived there would be what I called a "dealers' readjustment" period.

Business would be good, and rising, but demand would never outrun supply, with the result that strong competition would consistently prevail. Only the most able, alert, and aggressive dealers would make really substantial profits under such circumstances.

At the other end of the scale there would be a considerable number of dealers who would find that in the absence of a sellers' market they were better off out of business than

The NEWS presents in adjoining columns a condensation of a speech given by J. J. Nance before the recent annual meeting of the National Appliance & Radio Dealers Association. Subject of the talk was: "1950 Sales Promotion Plans of the Electrical Appliance Industry."

in, and would quit. That statement may seem like a very sour note. I think it is only realistic, however.

There was a big increase in the number of dealers during the three-year sellers' market when to make a profit it was only necessary to open up the shop each morning. So it is logical to expect some casualties as the result of competition.

But for the short term—say three to six months—last Fall's steel strike changed this picture. Top appliance brands are in short supply today, not because our industry doesn't have capacity to produce enough appliances, but because of the production lost during the strike.

This tight supply situation will last through the Spring season. In the face of strong demand that exists for appliances, today, the industry will simply not have an opportunity to accumulate inventories in preparation for the peak selling season in March, April, and May.

Received Rude Shock

In our industry we learned by receiving a very rude shock last Spring that our sales power had fallen almost to the vanishing point because of eight years of disuse.

Fortunately, our awakening, though rude, was thorough and in six months great progress was made in starting to rebuild.

Aggressive advertising reappeared; dealers began to hire and train salesmen, and salesmen began to go looking for customers instead of hiding from them. The successful start the industry made in restoring its salesmanship was responsible to an important degree for the quick comeback from the April slump.

Our biggest job during the current shortage period will be to guard against complacency.

The wise dealer won't allow himself even a moment of fancied security. He will never forget that every sellers' market must end, and that a dealers' readjustment is still overdue from the prolonged postwar sellers' market. He will go on building the sales power of his organization by sales training, by giving good service, by building prospect lists, and by every other method of good salesmanship.

The unwise dealer will think he is in for another easy ride and forget everything that happened from April to September last year.

Our industry is a young industry—in some products it is really an infant industry. That means it requires consistent and persistent sales pressure. It also means that we compete like the very devil for every sale.

As to the youthfulness and growth opportunities of our industry, let me give you a few facts on market penetration of various appliances that our research department assembled.

We often think of electric refrigeration as one selling job that has been pretty well completed. Yet there are at least 8,250,000 wired

homes that still use the old-fashioned ice box or some other primitive means of refrigeration.

Ordinary Washer Obsolete

There are 12 million wired homes that do not have an electric washing machine. It is almost unbelievable that any homemaker in this day and age would get along without this work-saving piece of equipment. And the ordinary washer, of which there are millions in use, has been made obsolete by the automatic.

Housewives are aware of this as indicated in a recent consumer survey which showed the automatic washer at the top of the list in answer to the question, "What appliance would you like most?"

You undoubtedly know how sales of electric ranges have been growing. More than 1,000,000 were sold last year. Electric cooking is gaining very rapidly competitively and yet it has a market saturation of only 16%. It may seem incredible but there are still 8,500,000 wired homes that do not use either gas or electricity for cooking.

We should recognize one competitor for electrical appliances that has been coming up very fast—the bottled gas industry.

In 1936 there were only 300,000 bottled gas installations, but by the end of 1948, this had grown to 5,250,000. Six hundred forty seven thousand were added in 1947 and 728,000 more were added in 1948. This makes a total addition of 1,375,000 of such installations in two years.

No Electric Range Salesmen

When surveys were made to determine why so many customers living in wired homes had installed bottled gas, it was found that more than 70% of these customers had never even considered buying an electric range. The reason given was that very few had ever been called on by an electric range salesman, and the significant thing was that all of them were under the false impression that bottled gas was much more economical to use than electricity.

Now I would like to return briefly to the situation arising out of the steel strike and the temporary sellers' market it has created.

Last April, when the customers suddenly started to back away and the bottom fell out of the market, appliance manufacturers were able to help give buying a big push by reducing prices. Don't expect that to happen if buying slumps and inventories pile up.

Manufacturers were able to make adjustments last April and May because the slump brought with it some cost savings, principally by ending the necessity for paying gray market prices for some raw materials. That condition is not going to repeat itself.

Everything in the general economic situation today is tending to push costs up, not down.

Favorable Prices

So we are going to have to count even more heavily on real salesmanship when the present shortage situation passes than we did last Spring. Fortunately today's prices on electrical appliances are favorable to the buyer.

Government statistics show that the cost of living today is 70% above 1939. Electric refrigerators are up only 30%. Even before the reductions last Spring they were well below the general advance in prices.

The 30% rise in refrigerators compares with a rise in food of almost 120%, an increase in clothing prices of 90%, and an advance in house furnishings of all kinds of almost 85%. The average price of low-cost automobiles rose 87% between 1941 and 1948.

The average hourly earnings of factory workers, which have risen 120% since pre-war, top by a wide margin the increase in electrical appliances. Compared with the increase in the low-cost 6-ft. refrigerator, the increase in wages has been four times as great.

We must remember, that even though the demand for appliances is strong today, we are still competing on every sale with some other article of desire that the customer might otherwise purchase. Therefore, it behoves us to keep on telling to every prospect the story of the outstanding dollar value offered in electrical appliances.

It is only by the dealer telling this story on the sales floor that the industry can realize a return on the tremendous postwar investment in modern production facilities as well as receive full credit from the public

for a pricing philosophy predicted on more goods for more people.

The second part of our value story is the extremely low cost of the electrical energy that operates appliances. We are greatly indebted to the utility industry which has done a phenomenal job in cutting its prices while expanding to make more power available to more families.

Assistance from Utilities

In 1950 we are going to get a tremendous assist from the electric utility companies. The vast expansion programs they have been pushing since the end of the war have now been carried to the point that safe reserve capacities have been restored in most parts of the country. Most operating utilities are now planning broad, costly campaigns to encourage the use of more power by a number already have campaigns.

Our appliance industry is unique in this respect. I know of no other industry that receives free such costly and extensive promotion from a companion industry.

So now is the time to make up your mind that you are going to be among the dealers that survive the dealer readjustment, no matter when that time may come, and that you will enjoy the good business that appears on the horizon with our economy on a higher plateau than we ever dreamed was possible pre-war.

Guard against succumbing to a false sense of security during this period when appliances are in short supply. Use to the fullest the opportunity the next few months will give you to build a real "Sunday punch" into your selling muscles.

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Fitzsimmons Details Procedure of UL In Rating Refrigeration And Air Conditioning Equipment Before Detroit ASRE, ASHVE

DETROIT—Objectives and test methods employed by Underwriters' Laboratories, Inc. in applying its standards to air conditioning and refrigeration equipment were outlined before a joint meeting of the local chapters of the American Society of Heating and Ventilating Engineers and the American Society of Refrigerating Engineers here recently by C. C. Fitzsimmons, assistant chief of the UL casualty and automotive department.

"I believe," said Fitzsimmons, "the clearest understanding of our basic thinking with regard to refrigeration equipment and the practical application of our standards will be gained if I select, say a representative store type air conditioning unit, and explain in detail the analysis, decisions, and tests, and the reasons therefore."

"This device is a 5-ton unit with a 5-hp. motor driving an open compressor, a $\frac{1}{2}$ -hp. or $\frac{3}{4}$ -hp. blower motor, the usual electrical controls, shell and coil condenser, and pressure relief means, in addition to a conventional finned tube evaporator. The unit is water-cooled.

"The job is supplied for 220-volt, 3-phase connection. It is charged with 'Freon-12' as refrigerant. It has an air filter and may have a heating coil down-stream from the blower.

"The first step is an analysis of the circuit diagram. This reveals that the compressor motor is directly controlled by a magnetic starter in which are the overload coils which serve as protection for the compressor.

sor motor. It also shows that a thermostat responsive to return air temperature controls the starter; that the blower motor may be independently controlled by a manual selector switch; that the single-phase fan motor is provided with an inherent overheating protective device for running protection; and that all wiring terminates in a main outlet box to which the line is connected by the installing electrician.

Assembled Sample Tested

"A completely assembled sample is now examined by the test engineer. This examination, as well as the tests on this large equipment, is usually conducted at the manufacturer's factory in co-operation with the manufacturer's engineering staff. Smaller assemblies are tested in our lab," he explained.

"Here is approximately what runs through our engineer's mind during the original examination.

"1. Are the terminating wires properly identified so that the installing electrician can make his hook-up without confusion or error?

"The terminating wiring must be unidentified, that is colored black, or other than white or natural gray, which is reserved according to the National Electrical Code for the connection to a grounded neutral line conductor.

"2. Is the terminal box of a size specified in the National Electrical Code so that the electrician has the

necessary room for the splices? Is the box of listed design, that is, of suitable wall thickness, protected from corrosion and with suitable knockout for conduit connection to the source of supply?

"3. Are the total electrical rating and the individual motor ratings marked on the device so that the electrician and the electrical inspector can determine the proper wire and fuse sizes?

"4. Is all internal wiring labeled by Underwriters' Laboratories, Inc., and is the wiring of suitable type and insulation for the job? Are wires and cords installed in a workmanlike and safe manner? Are proper wire sizes used?

"Here we frequently find that manufacturers have selected their wire sizes without taking into consideration the conditions which may frequently overload the motor circuits," asserts Fitzsimmons. "This defect is pointed out to the manufacturer.

"If cords are used internally in the machine, are they of the hard service type required? Are they supported so as to be protected from damage by the installer and service man?

"5. Is the magnetic starter of a listed type, and is it rated high enough to control the compressor motor?

"Here we have access to our green List of Inspected Electrical Appliances which, under its proper cate-

gory we find the starters listed, together with a rating which denotes whether the starter will safely handle the motor load.

"If the manufacturer has employed an unlisted starter, we suggest either that a listed one be employed, or that arrangements be made to test the starter for its suitability in this application.

"6. Are the proper motor overload coils as specified in our standard provided in the starter? If rated too high, they may permit hazardous motor burn-outs under overload conditions. If rated too low, they may cause excessive trip-outs and cause the service people to replace them.

Controller Assembly Checked

"7. Attention is now directed to the controller assembly comprising the thermostat and selector switch. These assemblies are frequently installed within the main metal enclosure of the device without a separate enclosure around them.

"Are the live terminals located so that the owner or serviceman will not accidentally contact them when oiling a motor, replacing a filter, or otherwise performing normal functions," questioned Fitzsimmons. "Are there sufficient spacings between the terminal and adjoining metal which might create leakage and a live cabinet, or possibly a short or grounded circuit?

"Manufacturers frequently overlook this very important item. If spacings adequate for the purpose are not provided, we discuss the use of insulating barriers, etc., to overcome the hazard with the manufacturer's engineers.

"Are the thermostat and selector switch listed and of suitable rating? Here we again have access to the 'green list.' If non-listed components are used, we discuss with the manufacturer whether he wants to use listed switches or to have them listed as a part of the investigation of the complete unit.

Is Fan Motor Protector Listed?

"8. Is the fan motor protector which prevents burn-out a listed unit? If so, we know the motor is protected against burn-out under overload conditions.

"We have not uniformly required running overload current protection on such constant load motors. In some instances, we have accepted devices which protect the motor only against locked rotor conditions or failure to start.

"9. Is the fan motor protective device itself protected against hazardous burn-out or blowup in case it is exposed to a short circuit?

"The concern here is that the main fuses for the machine are large, being based on the rating of the 5-hp. compressor motor. The overload device protecting the small fan motor if listed was tested for short-circuit conditions but the fuses used in the test were those which would normally be used in a small motor circuit. The larger fuses give less protection and accordingly we want to be sure that a short circuit will not create a hazard. Suitable tests known as group fusing tests are devised to establish the facts in the case.

"I might mention one point in this connection which has created some confusion in the minds of electrical inspection authorities. Under an Industry Advisory Conference Agreement and with the agreement of our Electrical Council we have exempted totally enclosed fan motors with listed Inherent Overheating Protective Devices from these group fusing requirements, when the motor is in a complete metal enclosure and with no combustible material near it," he explained.

Check Refrigeration System

"Up to now the analysis has been confined to the hazards of the electrical components of the system. We now direct attention to the refrigeration system proper.

"10. Is the refrigerant employed in this unit non-flammable, non-toxic, and has it characteristics which make it safe for use in an air conditioning system? Here we refer to the standard which restricts direct air conditioning systems to the use of non-flammable refrigerants having a lower degree of toxicity than the Group 4 refrigerants as defined in Underwriters' Laboratories, Inc. report, 'The Comparative Life, Fire, and Explosion Hazards of Commonly Used Refrigerants.' 'Freon-12' is a refrigerant which is commonly used and meets these requirements.

"11. We now come to the pressure vessels of the system. Is the com-

pressor of a listed design? If not, hydrostatic tests will be made to assure that it meets the strength requirements of the standard.

"Two samples will be exposed to increasing pressures with the seal capped until failure occurs. The minimum permitted ultimate strength for low sides of 'Freon-12' systems is 350 p.s.i.

"12. As the system is water-cooled, a listed pressure-limiting device is required to protect against over-pressure due to water failure. This device, separately listed, is subject to overload and endurance tests for its manufacturer.

"As installed, is there any way it can be shut-off so as to nullify the protection to the pressure vessels? No valves can be used between it and the pressure imposing element.

"13. Now how about the condenser receiver, a shell-type pressure vessel. As it forms part of a complete system investigated by UL, and is presumably under 5 cu. ft. in volume, it is not required that the vessel be ASME inspected.

Requirements May Change

"If as and when the ASA-B9 and ASME Code groups come to an agreement relative to the requirements for such vessels, our position in the matter may change," said Fitzsimmons, "but as of now we proceed as follows.

"We first adjust the pressure-limiting device to its maximum cut-off setting and operate the system with the water shut off, recording the maximum pressures pumped. We then select two samples of the pressure vessel and stress the vessel hydrostatically to failure.

"It is required that they withstand safely at least five times the pressure measured in the test with the water off.

"It is also required that the manufacturer conduct leakage tests on each production vessel and periodically test samples to failure hydrostatically, preferably in the presence of our inspector as a means of countercheck. The construction of the vessel is of course checked by our inspectors at the factory for material and fabrication.

"14. We next, come to the question of pressure relief. Due to the size of the vessel, it is exempt by the ASA-B9 from the mandatory use of a relief valve, and may be protected against explosion in a fire by a fusible plug.

"If a relief valve is used it shall be sized and set in accordance with the now fairly close to be adopted ASA-B9 Code.

To Test and List Valves

"We propose to test and list relief valves to determine that their discharge capacities as stamped on the valve are correct. This will permit both ourselves and local inspection authorities to establish compliance with B9 procedures.

"Likewise, in the case of fusible plugs, they shall be sized and have a melting point consistent with the size and working pressure of the vessel, and with the characteristics of the refrigerant employed. Details of the required sizes as well as the mathematical correlation between the vessel strength and the plug release temperature are now fairly well established for the B9 code, and we shall go along with the code when finally adopted.

"We shall of course make calibration tests on the fuse plugs at the time the system is investigated, and subsequently as a follow-up matter.

"15. The analysis has now been directed to the rest of the refrigerant containing components. Is the evaporator properly constructed and tested by the manufacturer? Is the tubing of a suitable material and wall thickness? Are the tube fittings listed? Are they of a material subject to season cracking? These questions all require answers satisfactory to our engineer before acceptance.

"16. Further construction details are given consideration. Is the air filter listed so that we are sure that excessive smoke and combustible material will not be directed into the duct system which might be attached to it. This could create a panic hazard.

"Does the acoustic or sound deadening material have a suitable degree of fire resistance?

"How is the condensate handled? If a joint or pan leaks, will water impinge on electrical parts, creating a casualty hazard?

"All of the foregoing goes through

(Concluded on next page)

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Manufacturer Must Take First Step To Get Services of Underwriters' Laboratories

(Concluded from preceding page)

the mind of the engineer when he analyzes the system for fire and casualty hazards.

"He now directs the preparation of the system for test. In addition to installing high and low side pressure gauges for the exploration of the pressures in the system, thermocouples are placed on motor windings, wiring, and electrical components. These are to determine if hot spots or hazardous temperatures occur on the electrical components under the conditions of maximum normal load.

Test Condition

"This test condition is to give the results of severe operating conditions though not deliberately an overload. By Industry Advisory Conference Agreement, we have standardized on 80° F. dry bulb, 67° F. wet bulb across the evaporator, and 80° F. to 100° F. water temperature through the condenser.

"We are not satisfied on the basis of our experience that this is adequately severe, and we may wish to approach the industry soon to specify a more severe test condition.

"With electrical instruments installed the system is tested until all temperatures are constant. The results are evaluated in terms of motor winding temperatures, wiring insulation temperatures, and the temperature on other electrical components.

"If the motors exceed safe winding temperature rises, the manufacturer may be directed to lower the rating of the overload coil. If unusual ambient temperatures around motors and wiring are discovered, creating unusual or hazardous temperature, appropriate changes to eliminate the hazards are recommended. If high temperature wiring is shown to be required such a recommendation is made.

Dielectric Test Made

"While the system is heated from the foregoing test a dielectric test is made. This consists of applying an alternating current potential of twice line voltage, plus 1,000 volts in this case, 1,440 volts between the electrical system and the frame and is intended to seek out any weakness in the electrical insulation.

"A test may be conducted if considered necessary to determine the effect of the heating coil on the fan motor and wiring with the unit operating on a heating cycle.

"The foregoing general procedure is often augmented by tests on electrical and refrigerant containing components, especially where non-listed components are employed by the manufacturer. Overload and endurance tests on switches, overload tests on motors, strength tests on compressors and pressure vessels, calibration tests on fuse plugs and relief valves, all are made with a view of obtaining a safe assembly.

"A manufacturer would do well in designing a machine or system to determine that listed components are employed. He thus saves the time and expense involved in having a number of purchased parts tested as a part of the investigation of his

system," suggested Fitzsimmons.

"I also want to emphasize again the importance we attach to our follow-up inspection services at the factory. You can recognize that the time and thought given to analyzing and testing for the hazards of the system would be nullified if after work is completed, the product was not then built in accordance with the specifications indicated by the investigation.

"Although many of you engineers are employed by companies who have products listed by the Laboratories and some of you are fully acquainted with the details of the procedure for submitting a product, it might be of some interest to the others of you who have not had the direct contact with us to know just how a product is submitted and some details relative to the process leading to a listing.

Client Must Make First Contact

"Usually the first contact we have with our client comes in a letter or a personal call from him. Incidentally," he said, "we do not solicit the submittal of products."

"After the initial contact by letter or personally, the laboratories has a fair understanding of the type of product which is to be investigated by blueprints or description. When the category of the product is determined, it is referred to the appropriate department.

"The manufacturer is supplied with a copy of our pamphlet 'Testing for Safety' which explains to him the procedure for submitting the product, a copy of the appropriate standard under which it is judged, and application forms. These latter indicate a cost limit for the work, a preliminary deposit against which the work is billed on a time cost basis and in the case of refrigeration equipment the reexamination fee which covers costs of inspection subsequent to listing. The manufacturer is also instructed regarding the samples required for test and their preparation.

"When the application is received the manufacturer is given a promise date before which a report is rendered.

"Thus, at the time the product is submitted, the manufacturer knows the maximum cost, the nature of the work to be done, the approximate time in which it will be completed, and the cost of the follow-up inspection work.

"Upon completion of the examination and tests of the equipment, the manufacturer receives either a report of criticism, or a report of listing which terminates in the usual issuance of a listing card bearing the model number of the equipment investigated.

"In cases where refrigeration equipment of an unusual nature is presented, the report is submitted for review and comment to our Casualty and/or Electrical Councils.

"These engineering Councils are an advisory and consultative group of engineers and inspectors with a wide knowledge in their field. Their association with Underwriters' Laboratories, Inc. is honorary and non-remunerative.

"The Engineering Councils of Underwriters' Laboratories, Inc. are five in number and their names indicate their scope. They are Fire, Automotive, Casualty, Electrical, and Burglary Protection.

"These men serve a most important function in the operation of Underwriters' Laboratories, Inc. They advise us in the preparation of requirements for various classes of equipment. They review and vote on the reports of investigations. With their practical experience and background they furnish our engineers with invaluable advice based on their knowledge of the actual field records of equipment.

Advice from Councils

"On occasion a product comes to us which we feel is hazardous in a manner and degree which cannot be evaluated by laboratory processes. In other words, a case where the listing or non-listing becomes a matter of judgment rather than of fact. In such cases we have found our council members advice to be of great practical value.

"In some instances we have presented to Council the manufacturer's verbatim comments on his product accompanied by our staff comments so that the whole matter may be objectively studied.

"Another part of our organizational arrangement which in my opinion does a great deal to make our organization the practical growing concern that it is are Underwriters' Laboratories Industry Advisory Conferences.

"Underwriters' Laboratories, Inc. publishes its own opinions as to the classification of products and is alone responsible for them. Its standards

are the basis of the opinions and must justify them. The various requirements of the several standards are important tools in the conduct of the work of the laboratories and while others cannot be permitted to select these tools those who are concerned are freely consulted.

"Industry Advisory Conferences are intended to secure such consulting services as to each industry concerned regarding matters of policy and technical problems involving standards, investigations, listing, and inspection of clients' products," explained Fitzsimmons.

"Industry Advisory Conferences are Laboratorie conferences. Both the Laboratories and the industries' representatives are appointed by the UL management. Manufacturers representatives are selected for their familiarity with their division of industry and reputation for sound judgment. They are considered to represent the industry rather than one manufacturer or trade association. They are expected to bring to the conference a broad industry viewpoint so that the matters of policy requirements and proposed changes of requirements will avoid the impractical.

"A conference has no scheduled times for meetings but may be called in session by the Laboratories when sufficient items or a single item of sufficient import have developed for discussion. Many conference problems are handled by correspondence.

"Conference meetings are informal and generally without a chairman or observing the customary rules of order.

"The practical application of the Industry Advisory Conference is evidenced in our work with the refrigeration industry. We have an In-

dustry Advisory Conference for Refrigeration comprising six members representing a good cross-section of the industry as a whole.

"It was through several consultations with the members of this conference that our Tentative Standard of Refrigeration Equipment was evolved.

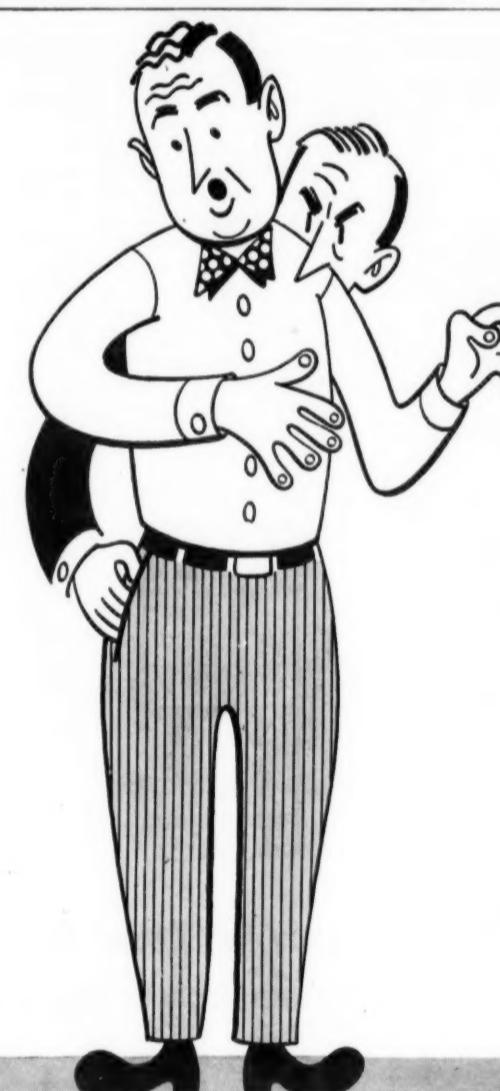
One Standard to Replace Two

"We have prepared a preliminary draft of our Standard for Air Conditioning, Commercial, and Domestic Refrigerating Equipment. This Standard is to replace the two now existing, namely the 'Standard for Unit Refrigerating Systems' and the 'Standard for Air Conditioning and Commercial Refrigerating Systems.' The standard has not yet been released for printing nor has it been submitted to our Casualty and Electrical Councils for comment. Consequently, it will not be available in final form for quite some time to come.

"We are currently awaiting final preparation and release of the ASA-B9 safety code which everyone hopes will be released sometime this spring.

"In such requirements as are applicable, our standard will closely parallel ASA-B9 and we have worked very closely with many B9 committees.

"Another and most important code which is utilized by us in establishing requirements for refrigeration equipment is the National Electrical Code, an ASA standard as well as a standard of the National Board of Fire Underwriters' for electric wiring and apparatus. This code, while essentially an installation code, serves as an important guide to us in the electrical sections of our refrigeration standard."



**Who's that guy
with his hand
in your pocket?**

Whoever he is, his hand's got no business where it is... and we've got a plan to get it out... and keep it out!

It's the usAIRco DIRECT-TO-DEALER FRANCHISE for the entire usAIRco packaged refrigerated air conditioners and evaporative coolers.

When you begin operating with this new plan of ours you quit dividing the profits with distributors or middlemen of any kind. You quit straining to meet arbitrary quotas set up by people who can't possibly know as much about your business as you do. You quit worrying about hanging on to your franchise. And you quit fretting about repair and service charges that eat up profits... because usAIRco units are protected by a 5 year warranty that pays these charges!

YOU RUN YOUR BUSINESS YOUR WAY!

If that sounds like it's your way of doing business, read below a little more of what the usAIRco DIRECT-TO-DEALER FRANCHISE can mean to you... then write on your business letterhead to the address below for the book that tells you the whole story.

HERE'S WHAT YOU WANT... HERE'S WHAT WE DELIVER

1. More Profits. All the profit is yours. By dealing direct with the manufacturers you eliminate distributors and middlemen of any kind. No other group takes a cent of the profits. And all units are priced to meet or beat competition.

2. Business Security. You run your business your way... with as much help from usAIRco as you want. You decide what and how much to buy. You have no arbitrary quotas to meet in order to keep your dealership.

3. Freedom-to-Buy. You're never urged or pressured to carry more inventory than you need to handle your volume. Yet stocks are nearby in strategically located warehouses ready to serve you.

4. Accepted Products. You sell the products of a company that's pioneered nearly every major advance in air conditioning design... an organization that had its start at the very dawn of the industry.

5. Strong Warranties. All usAIRco store and room units of 5 tons or less are protected by a five year warranty that guarantees replacement and installation of faulty compressor parts at absolutely no cost to you or to your customer.

6. Practical Sales Help. The entire sales and advertising staff of this nationwide organization is at your command. You'll get advertising cooperation, direct personal selling help from our field representatives, to help you move merchandise.

7. Engineering Counsel. The whole usAIRco application engineering staff is ready to help you on any sort of air conditioning installation. This sort of cooperation opens up a large and profitable field for you.

8. Financing Assistance. Through a large national financing company, usAIRco can arrange generous and flexible financing plans to assist you in accepting installment purchases. You are protected against credit losses.



Write on your letterhead

UNITED STATES AIR CONDITIONING CORPORATION

3371 Como Avenue S. E., Minneapolis 14, Minn.

Here's Your New HARRY ALTER'S DEPENDABOOK! NO. 151

Bargains! BARGAINS! Page after page of bargains in refrigeration parts and supplies—some 60% below standard prices. Everything guaranteed as described—money-back guarantee... 2% discount for cash... Get the new DEPENDABOOK and stock up. Buy your 1950 needs NOW!

REFRIGERATION PARTS CATALOG

WINTER CLEARANCE SALE Our buyers have combed the market to offer you the hundreds of amazing bargain sheets in this catalog.

THE HARRY ALTER CO., INC.

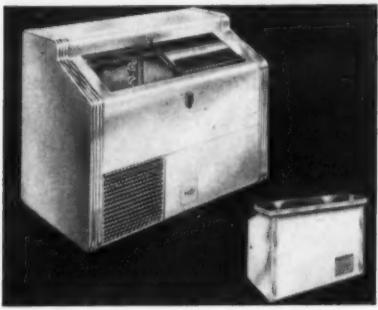
Service Doesn't Falter When It Comes From Harry Alter

THE HARRY ALTER CO.

1228 SOUTH MICHIGAN AVENUE, CHICAGO 16, ILLINOIS

134 Lafayette Street, New York 13, N.Y.

What's New



Beverage Cooler's Wide Opening Speeds Service

PHILADELPHIA—Jordon Refrigerator Co. here has announced availability of its new line of 1950 dry beverage coolers for underbar or serving counter use.

The new models are "completely changed in design and engineering, and offer many new and exclusive features," the company said. Functional and convenient exterior design is emphasized by Jordon.

Access to the interior of the cooler is made through the wide angle at

top opening which affords "greater vision and greater ease in stocking the cooler and in serving from it."

The top opening is covered by moulded hard rubber insulated "disappearing" doors which slide on specially designed curved tracks. The extra-wide top can be equipped with a special Panelyte serving counter.

The new model also includes a redesigned and greatly enlarged bottle cap compartment with a special pull out device on spring hinges that allows for quick, complete disposal of bottle caps.

Jordon coolers are available for self-contained or remote installations. All self-contained models are ready for plug-in installation and are equipped with hermetically sealed condensing units carrying a five-year warranty.

The coolers are available in stainless steel exterior finishes or a medium metallic green baked finish.

Outstanding feature of the line is the new heavy-duty cooling system.

"The extra-heavy-duty coil is so located to use the smallest possible amount of interior space, and does not detract from the over-all bottle storage capacity," Jordon stated.

"An extra-wide fan scientifically circulates cooled air to every part of the cooler, and is so designed to reduce to a minimum the amount of warm air intake when doors are opened."

Adjustable dividers are supplied as standard equipment. Heavily plated wire floor racks provide for sufficient air circulation space on the bottom of the cooler, it was pointed out.

All interior surfaces are galvanized metal to resist rust and withstand the high amount of moisture usually found in dry beverage coolers of this type.

The beverage coolers are available in 4½ ft., 6¼ ft., and 8 ft. 1 in. lengths with all models being 29 in. deep and 40 in. in height. Capacities range from 12 to 37 cases of standard 12-oz. bottles.

Most widespread use of the coolers is in cafes, bars, taprooms, and restaurants, Jordon said. However, the company noted, an increasing number are being used in retail food stores for self-service sales of ready cooled bottled beverages.

In addition, the model 40 cooler with the bartop attached provides a counter arrangement in packaged liquor stores where chilled wines and beers are sold for off-premise consumption. This provides the cooler and a counter in one combined unit.

The smaller sizes in the new model S40 are currently in production, with the complete line expected to be available by mid-February.

HERE'S SOMETHING HOT FOR COLD-WEATHER SALES



CARRIER HOME HUMIDIFIER

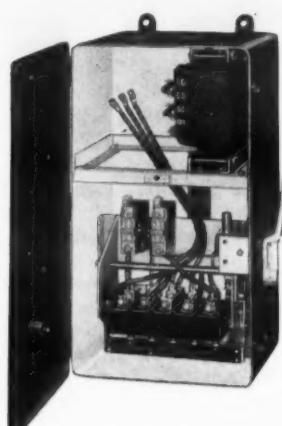
Evaporates up to one quart per hour.

Handsome two-tone walnut finish. Retail Price \$69.50.

Dealer discount. Limited stock. FOB Cleveland.

Immediate Shipment

AVERY PRODUCTS
1908 EUCLID AVE.
CLEVELAND 15, OHIO



Air-Break Starter Can Be Converted to Oil Easily

MILWAUKEE—A new manual autotransformer type starter for squirrel cage motors has been introduced by the Allen-Bradley Co. here.

It is available in four sizes ranging from 5 hp., 220-440-550 volts, to 250 hp., 440-550 volts, for 25, 50, and 60 cycles.

The switch mechanism is said to operate with a quick-make, quick-break action. Two automatic reset overload relays are standard equipment on all starters.

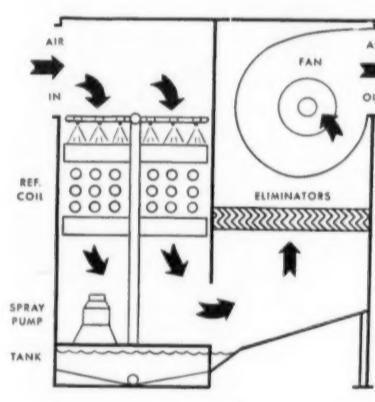
The new line comes in two forms. Form T has air-break contacts and Form X has oil immersed contacts.

The air-break form can be converted to oil-immersed operation merely by adding a standard oil tank that is supported beneath the switch. Conversion to oil-immersed operation requires no change in the switch other than the addition of the oil tank, according to the manufacturer. Over-all dimensions remain the same for air or oil-immersed starters.

A time-delay under-voltage release which presents unnecessary opening of the switching mechanism on slight voltage dips is standard on the largest size starter. It can be supplied at extra charge on the other sizes.

All Bulletin 646 autotransformer type starters have an adjustable time-delay mechanism for controlling the length of the accelerating period before switching the motor from starting to running taps.

This period is adjustable from 0 to 15 seconds. The factory setting is for about 5 seconds.



Spray Fan Cooler Fits In Where Room Ceiling Is Low

NEW YORK CITY—Niagara Blower Co. has announced a new series of spray fan coolers for installation in refrigerated rooms where high capacity is required but ceiling height is restricted.

In the new "Low Head Room" design the fan section is located on the side of the unit instead of on its top. The air enters the spray section at the top. It is chilled in passing down through the spray and over the refrigerant coils. It enters the fan section at the bottom and is discharged from the side at the top.

When refrigerant temperatures below freezing are used, the process is kept free from frost, ice, or from freezing by the use of brine or Niagara "No Frost" liquid in the sprays.

The application is to food freezing and storage, meat packing, ice cream hardening, candy chilling, cooling and freezing tunnels, and other refrigerating processes.

Five unit sizes are produced at present, with capacities ranging from 1,680 to 11,000 c.f.m. of chilled air. The maximum height is 72 in. Floor space required ranges from 16 sq. ft. to 72 sq. ft.

Patents have been applied for. The manufacturer is the Niagara Blower Co., 405 Lexington Ave., New York 17, N. Y.

Fisher Co. Unit Cools Water for Film Processing

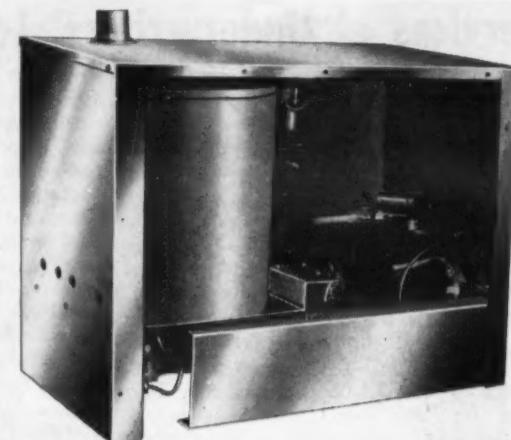
NEW YORK CITY—Equipped with hermetic water-cooled condensing units, three models of water-cooling (or heating) "refrigerators" designed for photographic dark room use have been introduced by Oscar Fisher Co., Inc., here, designer and manufacturer of photographic equipment.

Used with the company's TC-2211 temperature control, these models will supply water at the desired temperature, usually 68° F. within $\frac{1}{4}$ ° F., the company claims.

Incoming water is pre-cooled before it reaches the refrigeration section by a heat exchanger using outgoing waste water, which runs around 70° to 72°. The refrigeration system then cools the water to 50°, after which it is mixed automatically with the regular water supply to the pre-determined desired temperature.

Then it is delivered to the photographic sink where it surrounds film developing tanks and print trays to maintain proper processing solution temperature. The same water may also be used for washing film or prints.

Standard IC models provide only



cooling, but the water-heating feature is optional equipment at no extra cost.

The IC-2 model is supplied either as a self-contained unit or a built-in component of any of the company's processing sinks. The other two models are available only in separate stainless steel cabinets, the IC-3 measuring 28 by 29 by 21½ in. high; the IC-4, 28 by 43 by 21½ in. high.

Cooling capacities of the line range from 46 gals. per hour of 68° F. water delivered by the IC-2 machine from 85° inlet water to 360 gals. per hour delivered by the IC-4 with 70° inlet water.

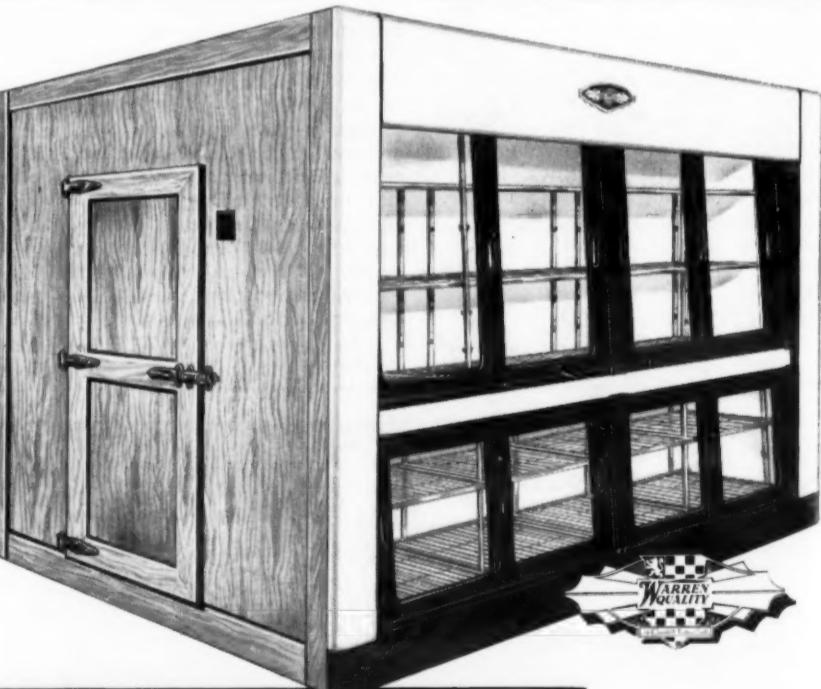
Scovill Fitting Is Designed for Aluminum Tubing

WATERBURY, Conn.—A new all-aluminum fitting for use with annealed aluminum tubing was announced recently by the Scovill Mfg. Co. here.

Aluminum tubing requires aluminum fittings for positive, permanent connections, Scovill explained. When brass fittings are used with aluminum tubing, a galvanic action occurs between the brass and the aluminum, corroding and weakening the seal, the company added.

This new aluminum fitting is of the Uniflare design as used in Scovill's brass fittings. The Uniflare design is a self-contained, two-piece fitting, with a self-flaring feature.

The body of the fitting contains a flaring cone, and the nut contains a thrust collar. One turn of the nut, with an ordinary wrench, is sufficient to shear off the collar, and further tightening clamps the collar onto the tube to form a seal.



The Lowboy RD

FOR QUALITY, ECONOMY & MULTIPLE PERFORMANCE!

This popular, fast-selling WARREN Refrigerator combines a LOWBOY Walk-in Cooler with a sliding-door display at only slightly more than the cost of a standard LOWBOY. Display and walk-in are refrigerated by one economical cooling unit. Ideal for super market or small store. Franchises are available in some territories.

THE WARREN COMPANY, Incorporated

P. O. Box 1436

Atlanta 1, Georgia

ARE YOU USING REFRIGERATION ABSTRACTS?

You will find in its pages a vast wealth of information on the sources of published information on refrigeration and air conditioning.

Included are references to design, engineering materials, refrigerating media, food processing and countless applications.

The section devoted to patents is alone worth the price of the publication.

REFRIGERATION ABSTRACTS is published in five issues annually, including a subject-author index.

Price \$7.00 per year

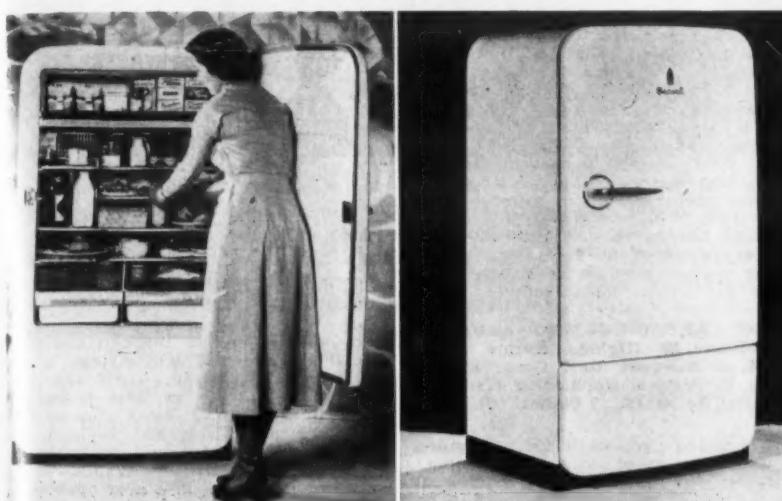
Special price to schools and public libraries

Subscriptions may be predicated to include the first issue published, January 1946. For further information, please write to

**THE AMERICAN SOCIETY OF
REFRIGERATING ENGINEERS**

40 West 40th Street, New York 18, N. Y.

What New Servel Refrigerator Looks Like



Photographs indicate design of Servel's 1950 six-model gas refrigerator line. Features of the redesigned line include new exterior appearance, "quick-change" interior, frozen food storage compartments, ice cube tray releases, shelves of flat ribbon-type strips with plastic coating.

Kelvinator To Stress 'Pioneer' Role In 1950 Refrigerator Ads

DETROIT — A comprehensive national advertising program calling attention to Kelvinator's long record of public service in the development of refrigeration for the home will spearhead the promotion of Kelvinator's 1950 refrigerator line.

John C. Bonning, advertising and sales promotion manager, said the history of Kelvinator's leadership in the household refrigeration industry would be prominently featured in all advertising, together with emphasis on the large-capacity, small-floor-area story of Kelvinator's 1950 long-door refrigerators.

He said three major themes would appear in Kelvinator advertising, in national magazines, newspapers, television, radio, and billboard displays:

1. Kelvinator is the oldest manufacturer of electric refrigeration for the home.

2. The new "Masterpiece" refrigerators provide up to 12 cu. ft. of refrigerated space in the floor area occupied by pre-war "sixes."

3. In styling, space-saving capacity, and price, Kelvinator offers the "space, the beauty, and the buy."

"Kelvinator's 1950 advertising program has been laid out in anticipation of the industry's strongest competitive selling year since 1941," Coward said. "Customers will be shopping around more than ever for top-quality, top-value merchandise with a long record of proven performance."

Kickoff advertisement in the national magazine campaign, which will include *Good Housekeeping*, *Household, Sunset, American Home, McCall's, Better Homes and Gardens, Saturday Evening Post*, and *Life* magazine, is a four-color full-page layout.

Excise Tax Repeal--

(Concluded from Page 1, Column 4) telephone and telegraph communications, and the entire group of retail excises, including such items as toilet preparations, luggage and handbags," he told Congress.

At the same time, the President asked Congress to raise \$1,000,000,000 in additional revenue, mainly by upping the tax rates of large corporations.

Appliance manufacturers have attacked the 10% excise tax now applied to some electrical appliances as "discriminatory" and a handicap to volume sales. They have urged that the tax be eliminated or reduced and put on a broadly distributed basis.

It was theorized in some quarters that Mr. Truman did not mention manufacturers' excise taxes for fear that consumers might hold off buying appliances in the hope of being offered lower prices. The attitude of Congress on the question is still not known.

Retail groups, too, have sought abolition of such taxes. One of them, the National Appliance and Radio Dealers Association, has recommended that the revenue lost through such action be made up by "taxing the untaxed."

At least one dealer organization, the American Retail Federation, said it will continue to work for repeal of all wartime excise taxes. Individual manufacturers indicated they would do likewise.

Appliance Price Picture--

(Concluded from Page 1, Column 5) were considering a price upgrading within two months.

Meanwhile Kelvinator has indicated that a decision as to whether or not retail prices of its refrigerators should climb will come in the next 60 to 90 days. And one large washing machine manufacturer stated that his tub supplier had warned him to "stand by" for a rise in the price of tubs.

Yet even in the face of such grim realities, several major appliance firms were planning to step up the production pace.

At General Electric's Erie, Pa. refrigerator plant the company predicted full output would be reached by March 1. The factory has for the past few weeks been operating at only 80% of capacity.

Similar production increases were likewise being announced by Gibson Refrigerator Co. (adding 350 workers) and Crosley (see story elsewhere in the NEWS).

Only sour note came from one major producer who claimed that unless his material suppliers were able to catch up, he would be compelled to make cutbacks in production.

Crosley Boosts Output, Intensifies Training

CINCINNATI—A 30% increase in the production facilities of its Richmond, Ind. plant has been announced by Crosley Div., Avco Mfg. Corp. here. This was followed closely by the launching of the most intensive sales training program in Crosley's history.

In describing the increased production facilities, J. W. Craig, Avco vice president and general manager of Crosley, revealed that the new equipment would enable the plant to produce 2,500 refrigerators per day—the highest rate of production in the company's history.

W. A. Blees, Crosley general sales manager, indicated that the training program, already underway, would last through part of April.

One hundred regional representatives from Crosley's 10 regional offices have been trained and, with the assistance of factory personnel, will conduct schools in their districts for distribution district managers from Feb. 20 to 26.

These trainees will in turn instruct dealer personnel in schools conducted during March and April.

McCray Adds Hermetics--

(Concluded from Page 1, Column 2) wired with suction pressure controls and across-the-line starters," McCray pointed out. "The installation of these units is a matter of connecting the electrical line and refrigerant tubing.

"Water-cooled units have water regulating valves attached. Propeller fan motors used on air-cooled condensing units have pre-lubricated, factory-sealed bearings, and require no lubrication.

"Each receiver is equipped with a petcock to test the refrigerant level after the evaporator has become active and cold, eliminating the use of a liquid sight glass."

The McCray hermetic will have a special Japan (brown) color finish.

NARDA Fair Trade Stand--

(Concluded from Page 1, Column 4) in this economy of ours. But competing on the basis of merchandising and promotional skill is entirely different than competition on price. No one wins; everyone, including the customer, loses.

"Our board of directors made provision in the 1949 program for progress on fair trade. Toward the end of the year, Chicago and surrounding counties was selected as a test area to determine: 'Can fair trade pricing succeed?'

"A committee has been named and shortly after this meeting, their program will be announced. I can tell you now that it is an objective program.

"We shall seek the cooperation of manufacturers and distributors—and we have a right to expect that cooperation because we are asking only that they test with us the solution to the price-cutting problem. If manufacturer, distributor, or retailer suffers as a result of it, then fair trade will not be the answer.

"We are sure, however, that no one will suffer, except perhaps the price-cutter, who cannot sell competitively on a basis other than that involving price.

"In Evanston, the NARDA members banded together to approach the problem in their way. What is known as the Evanston Plan resulted.

"A series of educational and institutional advertisements slanted at the consumer to make him aware of the inadvisability of buying from any but reputable, legitimate merchants who stand behind their products and services. These advertisements will be made available to NARDA dealers everywhere."

Among other resolutions passed at the meeting, in addition to the one on fair trade, were these:

That the association is in favor of the repeal of wartime excise taxes on appliance and radio-television products, and that the tax revenue which is thereby lost shall be made up by taxing the untaxed, including co-ops and institutions engaged in business for profit.

That a committee be appointed by the president to promote a membership contest between the states. (During the meeting, members were asked to become "part-time salesmen" for NARDA by pledging to contact at least two membership prospects each week.)

That a suitable award be given each year to a manufacturer for his outstanding contributions to the retail segment of the appliance and radio-television industry and that other manufacturers who are deemed deserving by reason of their policies and practices be given meritorious mention from time to time in NARDA's weekly publication.

Popky To Be Sales Mgr. Of Victory Metals Divs.

PHILADELPHIA—C. Jesse Popky has been named general sales manager of all divisions of Victory Metal Mfg. Corp. as the first move in a nationwide expansion program. A. Raymond, president, has announced.

Popky is a member of the American Society of Refrigeration Engineers, and has been active in the industry for 22 years. Associated with the Philadelphia Electric Co. for six years in the commercial refrigeration sales department, he then specialized in General Electric commercial refrigeration as sales supervisor and engineer with the Judson C. Burns Co., for 16 years.

The firm has added to its Vimco stainless steel refrigeration line a new line of all-metal constructed refrigerated cases, under the brand-name "Sta-Kold." With this new line, which also features stainless steel, Victory said it "plans to invade the low-cost field in this country as well as abroad." The company added that it is already doing "a substantial export business" with the Vimco line.

Sunroc Production Reaches 80% of Capacity After Fire

GLEN RIDDLE, Pa.—Barely eight weeks after a disastrous fire completely destroyed the main plant and office building of the Sunroc Co., the firm is already set up for operations equal to 80% of normal capacity, with further advances expected in the near future, a spokesman said.

29 Firms Sell 23,763 Freezers During November; 11 Months' Volume Reaches 289,795 Units

Summary for November and First Eleven Months, 1949

Electric Farm and Home Freezers—Complete—Sales by Sizes—Units

Farm and Home Freezers complete with high and low side and cabinet, where 50% or more of the net cabinet capacity is designed for the freezing and/or storage of frozen food.

NOVEMBER (29 Companies)

Sizes	Domestic (48 States and D. C.)	Canadian	Other Foreign	Total
1. 4.9 cu. ft. and under..	1,921	...	55	1,976
2. 5.0 to 6.9 cu. ft.	1,690	...	122	1,812
3. 7.0 to 8.9 cu. ft.	4,956	...	163	5,119
4. 9.0 to 10.9 cu. ft.	1,974	...	17	1,991
5. 11.0 to 12.9 cu. ft.	4,415	...	28	4,443
6. 13.0 to 16.9 cu. ft.	4,619	...	2	4,621
7. 17.0 to 20.9 cu. ft.	3,518	...	7	3,525
8. 21.0 to 29.9 cu. ft.	108	...	...	108
9. 30.0 to 39.9 cu. ft.	162	...	...	162
10. 40.0 to 49.9 cu. ft.	2	...	...	2
11. 50.0 to 59.9 cu. ft.	4	...	...	4
12. 60.0 cu. ft. and over..	...	...	...	...
Total All Models ...	23,369	394	23,763	
13. Total Upright Models (included in above) ...	875	11	886	

FIRST ELEVEN MONTHS (27-31 Companies)

Sizes	Domestic (48 States and D. C.)	Canadian	Other Foreign	Total
1. 4.9 cu. ft. and under..	18,514	...	1,267	19,781
2. 5.0 to 6.9 cu. ft.	37,697	...	847	38,544
3. 7.0 to 8.9 cu. ft.	70,202	1	1,957	72,160
4. 9.0 to 10.9 cu. ft.	21,010	...	91	21,101
5. 11.0 to 12.9 cu. ft.	63,412	...	154	63,566
6. 13.0 to 16.9 cu. ft.	44,877	...	108	44,985
7. 17.0 to 20.9 cu. ft.	25,716	...	60	25,776
8. 21.0 to 29.9 cu. ft.	1,570	...	6	1,576
9. 30.0 to 39.9 cu. ft.	2,240	...	...	2,240
10. 40.0 to 49.9 cu. ft.	19	...	...	19
11. 50.0 to 59.9 cu. ft.	1	...	...	1
12. 60.0 cu. ft. and over..	46	...	...	46
Total All Models ...	285,304	1	4,490	289,795
13. Total Upright Models (included in above) ...	12,775	53	12,828	

Participating Companies: Avco Mfg. Corp.; August G. Barkow Mfg. Co.; Beatty Mfg. Co.; Ben-Hur Mfg. Co.; Brewer-Titchener Corp.; Carrier Corp.; The Coolerator Co.; Deepfreeze Div., Motor Products Corp.; Frigidaire Div., General Motors Corp.; General Electric Co.; Gibson Refrigerator Co.; Hotpoint, Inc.; International Harvester Co.; Kelvinator Div., Nash-Kelvinator Corp.; Masterfreeze Home Locker Mfg. Co.; The Maytag Co.; Norge Div., Borg-Warner Corp.; Oregon Refrigerator Co.; Portable Elevator Mfg. Co.; Revco, Inc.; Sanitary Refrigerator Co.; Schaefer, Inc.; Emil Steinhorst & Sons, Inc.; Seeger Refrigerator Co. (out 3-1-49, in 11-1-49); Sub-Zero Freezer Co., Inc.; Victor Products Corp.; Westinghouse Electric Corp. (in 5-1-49); Wilson Cabinet Co., Inc.; Whiting Corp.; Ace Cabinet Corp. (out 2-1-49); General Refrigerator Corp. (out 3-1-49); Stoddard Mfg. Co. (out 4-1-49).

Penn Switch Plant Mgr.

Dies After Long Illness

GOSHEN, Ind.—Mark D. Disaway, for more than 20 years plant manager of Penn Electric Switch Co. here, died on Jan. 9, after a long illness.

He had been closely connected with the automatic control business for many years and was well known in the heating, refrigeration, and pump industries.

At the time of his association with Penn Electric Switch Co. in 1926, he was recognized as an authority on the use of corrugated metal bellows in thermostatic controls for refrigeration.

He became factory manager at that time, and became a director of the company in 1928, company records indicate.

G-E Union Election--

(Concluded from Page 1, Column 4)

Wilson of G-E, charged that the company had "entered into a collusive deal at Schenectady under which the local (Local 301-UE) would be paid over check-off moneys in return for turning in new signed check-off cards."

James B. Carey, president of the administrative committee of the IUE-CIO, accused General Electric of showing partiality and challenged the UE to a consent election before Feb. 10.

Another Texas Theater Job

FORT WORTH, Tex.—Plans for the new Westcliff Theater have been completed. The new theater, costing with equipment approximately \$250,000, will be air conditioned.

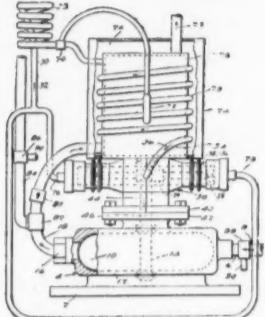


TROUBLE-FREE

PATENTS

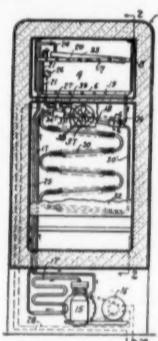
**Week of September 20
(Continued)**

2,482,220. LIQUID COOLING DEVICE. Dale Smith, Englewood, Ohio. Application Sept. 6, 1946, Serial No. 695,233. 3 Claims. (Cl. 62-141.)



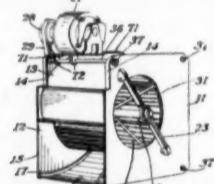
1. A water cooling apparatus including a water rotor comprising a motor casing having an inlet pipe and an outlet pipe and containing a rotatable drive shaft having a water driven rotor mounted thereon, a refrigerant pump casing supported by the motor casing and containing pumping elements operatively connected to the drive shaft within the pump casing, a water tank supported by the pump casing and having an outlet water pipe for supplying refrigerated water, the outlet pipe from the motor casing being connected to the water tank, a refrigerating line including evaporator coils disposed in heat exchange relation with said water tank, one portion of said refrigerating line having condensing means connected thereto and being connected to one portion of the pump casing, another portion of said refrigerating line being connected to another portion of said pump casing, and a restrictor element arranged within the refrigerating line between the condensing means and evaporator coils.

2,482,222. TWO-TEMPERATURE REFRIGERATING MEANS. Minor Harrison Strang and Ralph J. Burger, Kendallville, Ind., assignors to McCray Refrigerator Co., Kendallville, Ind., a corporation of Indiana. Application Feb. 16, 1948, Serial No. 8,515. 6 Claims. (Cl. 62-102.)



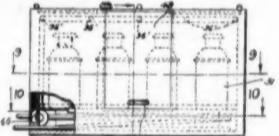
2. In a refrigerator, an insulated compartment, a closed refrigerant line in the compartment comprising a down line, a rising coil and a connecting pipe between the tops of the coil and the down line, a pipe for a refrigerant of approximately constant temperature in heat-exchange relation to the connecting pipe, a fan for forcing air down past the coil, and thermostatic means controlling the fan in accordance with the temperature in the upper portion of the compartment.

2,482,519. SQUARE SIDED BLOWER. Gerald L. Schwarz, Cleveland Heights, Ohio, assignor to Air Controls, Inc., Cleveland, Ohio, a corporation of Ohio. Application July 19, 1947, Serial No. 762,188. 6 Claims. (Cl. 230-133.)



1. A milk cooler comprising a casing including an unperforated top, a plurality of sides and a bottom, door means, said door means having opening means provided with vertically spaced side edges and a lower edge, said opening means being located in one of said casing sides, said supporting means for supporting a plurality of milk cans in upright position whereby said cans may be inserted and withdrawn from said door means, said supporting means being substantially parallel to said opening means lower edge, and said door means being located above said bottom to provide a

2,482,579. MILK COOLER. George R. Duncan, Washington, Mo. Application May 26, 1948, Serial No. 29,336. 6 Claims. (Cl. 62-141.)

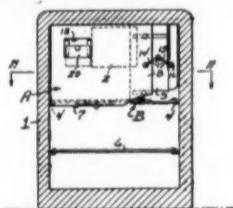


1. A milk cooler comprising a casing including an unperforated top, a plurality of sides and a bottom, door means, said door means having opening means provided with vertically spaced side edges and a lower edge, said opening means being located in one of said casing sides, said supporting means for supporting a plurality of milk cans in upright position whereby said cans may be inserted and withdrawn from said door means, said supporting means being substantially parallel to said opening means lower edge, and said door means being located above said bottom to provide a

2,482,915. REMOVABLE MEAT STORAGE INCREASER. Benjamin F. Kaback and Otto R. Quade, Milwaukee, Wis. Application Jan. 14, 1946, Serial No. 641,137. 4 Claims. (Cl. 62-89.)

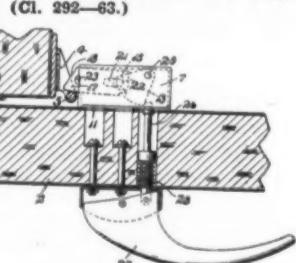
Week of September 27

2,482,959. REFRIGERATOR LATCH. Lloyd L. Anderson and Robert E. Johnson, Grand Rapids, Mich., assignors to Winters & Crampton Corp., Grandville, Mich., a corporation of Michigan. Application June 10, 1946, Serial No. 675,720. 5 Claims. (Cl. 292-63.)



4. The combination with a refrigerator having storage shelves and supporting brackets therefor, of compartment panels, one designed to take the place of a top storage shelf and to rest on its supporting bracket, and the other panel extending from said first panel to the top of the refrigerator, said panels provided with cooperating ventilating openings, an adjustable and slidably end extension, on each panel, means for holding said panels in adjusted position, and means for supporting and limiting the movement of said extensions.

2,483,007. REFRIGERATING APPARATUS. William W. Higham, Marion, Ohio, assignor to Newport Steel Corp., a corporation of Indiana. Application March 5, 1946, Serial No. 652,027. 3 Claims. (Cl. 230-206.)



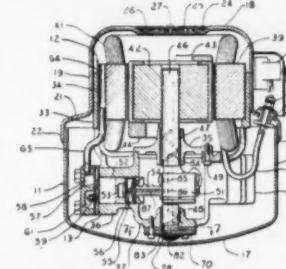
1. In a latch structure, a housing having spaced sides and having an end between said sides with an opening therethrough, a latch bolt located within the housing with a free end portion thereof adapted to pass through said opening, a member located within the housing of a generally triangular form, a pivot pin carried by the housing upon which said member is mounted for pivotal movement at one of its corners located inwardly a distance from the inner end of the bolt and near the edges of said sides,

a pin extending through said member at another corner thereof located outwardly a distance from said first pin, said latch bolt having longitudinal slots for the passage of said pin therethrough, spring means housed in the bolt bearing at one end against second mentioned pin and at the other end, bearing against the bolt to normally hold the bolt in an outer position with respect to said member, said bolt being movable inwardly on compression of said spring with said member held against movement, and a movable stop means located adjacent the remaining corner of said member and back thereof to normally hold the member against movement, said movable member being adapted to be moved away from its normal position to release said member for pivotal movement.

2,483,007. REFRIGERATING APPARATUS. William W. Higham, Marion, Ohio, assignor to Newport Steel Corp., a corporation of Indiana. Application March 5, 1946, Serial No. 652,027. 3 Claims. (Cl. 230-206.)

1. In a sealed compressor for refrigerating mechanism; an exterior sealed casing, the upper part of the casing having a cross dimension less than the lower part of the casing and the two parts being joined substantially at a flared shoulder; a main casting in the casing having a supporting portion fitted in the upper part of the casing; a compressor cylinder formed integrally with the lower end

of the main casting; a vertical shaft journaled in the casting; a motor for driving the shaft having a body fixedly located within the supporting portion of the casting; an outlet for compressed



refrigerant extending through and sealed into the shoulder of said casting; an inlet for refrigerant opening into the lower part of the casing; an inlet passage for the cylinder defined by a clearance between the motor body and the supporting part of the casting; and an inlet tube extending from the clearance to the cylinder having an inlet port opening upwardly adjacent the top surface thereof and the inlet tube having a relatively loose fit in said port for the seepage of lubricant from the inside of the casing into the cylinder.

(To Be Continued)

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" \$5.00 per insertion. Limit 50 words. 10¢ per word over 50.

RATES for all other classifications \$7.50 per insertion. Limit 50 words. 15¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count. Please send payment with order.

POSITIONS WANTED

CAREFULLY SELECTED group of trained men, graduates of reliable and well established trade school now available to fill positions in the radio or refrigeration field. Willing to travel anywhere. Why not fill that vacancy with an efficient and reliable man? Write EASTERN TECHNICAL SCHOOL, 888 Purchase Street, New Bedford, Mass.

POSITIONS AVAILABLE

AIR CONDITIONING engineer. Michigan's leading air conditioning distributor and contractor has opening for a thoroughly experienced engineer. Must be capable of designing and estimating jobs up to 50 tons. This is a permanent position offering top salary and opportunity for rapid advancement. For prompt interview write giving complete resume of past experience. JAMES AND ROACH, INC., Carrier Distributors, 282 E. Milwaukee Ave., Detroit 2, Mich.

SALES PROMOTION man. Experience with sales management practices in this industry desirable. G. E. commercial refrigeration and air conditioning. Tyler refrigerating equipment, exclusive Maryland distributors. Are you tired of traveling and wish to settle down? Get in touch with us for an exchange of particulars. OREOLE REFRIGERATION COMPANY, Baltimore 23, Maryland.

COMMISSION SALESMEN and manufacturer's representatives wanted to handle well-known line of freezers and milk coolers. Several territories are now open for aggressive salesmen who are acquainted with and can sell dealers, jobbers and distributors in their territories. Non-competitive lines can be handled simultaneously. Write stating experience and qualifications. EMIL STEINHORST & SONS, INC., Utica, New York.

EXCELLENT OPPORTUNITY for qualified refrigeration and air conditioning equipment sales engineer in eastern district comprising eastern half Penna., Virginia, southern Jersey, Maryland, Delaware and Washington, D. C. Position includes supervision of appointed distributors and direct sale of large capacity refrigeration and Pakice equipment. Please forward complete information to THE VILTER MANUFACTURING COMPANY, Milwaukee 7, Wisconsin.

SALES MANAGER. Phila. manufacturer of prefab. sectional freeze coolers, nationally recognized, reorganizing sales dept. Proven sales and organizational ability, knowledge of distribution methods required. Following in industrial refrigeration trade essential. Duties include appointing distributors, factory agents, contacting national accounts. Real opportunity with firm of modest size; moderate starting salary plus liberal commission on gross sales. Must have car, willing to reside Phila. or commute. Give full details first letter, BOX 3393, Air Conditioning & Refrigeration News.

WANTED: REFRIGERATION engineer, between 30 and 40 years old. Experienced in designing, testing and manufacturing low temperature equipment. Old established New York state manufacturer. Please give full details in first letter, BOX 3396, Air Conditioning & Refrigeration News.

COMMERCIAL REFRIGERATION and air conditioning salesman wanted by large and well established dealer in a heavily populated midwestern section. Must be experienced and successful. Salary and commission. Please state age, experience and references in detail. BOX 3397, Air Conditioning & Refrigeration News.

REFRIGERATION AND air conditioning salesman. Experienced and capable of selling, designing and laying out jobs for service and installation dept. We are located in N.E. Penna. Replies held strictly confidential. BOX 3398, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

WHOLESALE SEALED unit exchange and rebuilding. We will rebuild and convert your unit to "Freon-12." One year

guarantee. Write for price list and shipping instructions. ADVANCE REFRIGERATION COMPANY, 829 East McNichols Road, Detroit 3, Michigan.

BRAND NEW in original crates, 14 ice dispensers, self-contained with 1/4 H.P. Copeland units. This machine makes ice cubes and ejects them automatically into an insulated ice hopper which is included in price. Our cost \$525.00 each. Sacrifice for \$225.00 each. ALLEN & PRICE REFRIGERATION CO., 107 So. Western Ave., Los Angeles 4.

REFRIGERATOR DOORS. 3'6" by 6'6" double batten auto close doors complete with removable track heads for 7/8" track. 1 1/2" corkboard insulation. Brand new, \$95 each. Freight prepaid in U.S. BIMEL CO., Cincinnati, Ohio.

LIQUIDATION SALE, 60 cubic foot frozen food cabinets, complete with plates, compressor and controls, upright, 2 door model, excellent for farm, estate, club, hotel, restaurant, etc.; holds approximately 2000 lbs. frozen food or ice cream, will also quick freeze. 6 1/2" high, 7' width, 2 1/2" depth. Last 3 units priced at 40% below cost. Write FREEZERS, c/o 123D Larchmont Acres, Larchmont, New York. Call New York City—Digby 4-1989.

HOME FREEZERS, about 4 cubic feet; measuring 27" x 25" x 34" deep outside; 19" x 17 1/2" x 16" inside; top has 3" and rest 4" insulation. Baked white enamel exterior. Price \$30.00 less compressor, valves, tubing and control. GENERAL REFRIGERATOR & STORE FIXTURE CO., 856 N. Broad St., Philadelphia 30, Pa.

STANDARD BRAND condensing units completed with motors. 1/4 HP @ \$45. 1/3 HP @ \$52. Net f.o.b. NYC. 110 V 60 cycles. Other sizes and voltages also available. All brand new in original crates. Limited quantity. Act now. Specifications upon request. MANN REFGN. SY. CO., 15 Astor Pl., New York, N. Y.

FRANCHISES WANTED

MANUFACTURER'S AGENT, metropolitan N. Y. area, sales engineer, 35, handling Recoy condensers, coils, and cooling units and water conditioning equipment, desires additional items, particularly cooling towers. No. 1 producer in former selling position. Experienced estimating and servicing. HOWARD G. EGGINSON, 225 W. 34th St., New York 1, N. Y.

BUSINESS OPPORTUNITIES

WANT PARTNER with sales and executive ability to manage sales end of service and appliance shop established 7 years. Very desirable domestic and commercial franchise in active California. Half interest in entire organization \$6,500.00. Will stand investigation. 202 N. Macay Ave., San Fernando, California.

DISSOLVING PARTNERSHIP, selling established commercial refrigeration & air conditioning business. Stock, tools, truck at inventory price near \$10,000. Good lease, modern living quarters in office building. Natural gas lines being laid in city, excellent opportunity for heating; Wisconsin's prosperous city over 50,000; excellent hunting and fishing. BOX 3395, Air Conditioning & Refrigeration News.

SCHOOLS

DETROIT AIR Conditioning Institute is accepting applications for enrollment in spring term classes starting January 31, 1950. Fully GI approved courses in air conditioning, refrigeration, heating, ventilating, sheet metal layout, heat pump engineering. Write for free information. DETROIT AIR CONDITIONING INSTITUTE, Dept. D, 4258 Woodward, Detroit 15, Michigan.

MISCELLANEOUS

FRIGIDAIRE SEALED units, 1933 to 1937 remanufactured. Our exclusive method enables these machines to operate more efficiently than when new. Also rebuilding on all other sealed units. Write for price list. BRIGHT'S REFRIGERATION, INC., 14410 E. Jefferson, Detroit 15, Michigan.

NORGE SEALED units remanufactured and exchanged. Immediate delivery from stock. 1 year guarantee. Write for prices and shipping instructions. Complete Norge engineering service. 22 years experience. MODERN REFRIGERATION CO., INC., 12541 E. McNichols Road, Detroit 15, Michigan.

WANTED

Sales Training Man of Executive Ability

A leading appliance manufacturer, located in Chicago, has an unusual opportunity for a man between 35 and 40 years of age with the following qualifications:

1. Strong sales background.
2. Knowledge of distribution at both wholesale and retail levels.
3. Ability to write about selling.
4. Experience in conducting sales meetings.
5. Record of having worked well with large sales and sales training organizations.

Write fully and please enclose a snapshot of yourself. Members of our organization know about this ad, and your reply will be held in strict confidence.

BOX 3392, AIR CONDITIONING & REFRIGERATION NEWS

TELLING and SELLING

A GUIDE TO SMART ADVERTISING AND MERCHANDISING PRACTICES

This series of articles comprising ideas and principles for the small retail or manufacturing business is written by James D. Woolf, who was or more than 20 years a vice president and director of J. Walter Thompson Co., one of the largest advertising agencies. Out of his experience embracing all types of advertising and merchandising he brings his counsel to the small businessman who must plan his own advertising and promotional efforts.

Head or Heart Appeal?

Advertising that sells reaches for the consumer's pocketbook through, primarily, either his head or his heart.

Of course, no advertising appeal is 100 per cent one or the other. The heart and the head collaborate amably (but sometimes quarrel violently) each time a man makes a decision to exchange his hard-won money for an article of merchandise or a service. But in most instances one of the two appeals plays the dominant role.

The "heart approach" I shall define here as the *Emotional Appeal*, the "head approach" as the *Intellectual Appeal*. These are loose definitions, to be sure, but their connotations are clear.

My readers have seen what an Emotional Appeal did some years ago for Listerine. Even her best friends wouldn't tell the sad and wistful girl why she sat alone in a corner at dances and parties. The reason, of course, was Halitosis, but an "intellectual" dissertation on this affliction, its cause and its scientific correction, such as one might find in a medical journal, was given secondary place in the copy.

HEART TUG SELLS PIANOS

Some years ago a New York department store had too many cheap pianos. "Intellectual" appeals to the head—copy that told in reason-why detail about the merits of the piano,



its construction, its beautiful finish, its sweet tone, its low price, etc.—failed to make sales.

Then one morning a full-page newspaper advertisement displayed this headline: "Make Your Daughter A Lady." The copy said that music was the soul of culture, that ability to play the piano was the acme of social finish, the secret of popularity. Then followed factual copy about the piano itself, what a fine value it was. Twenty-four hours later, it is said, every piano was sold.

In contrast to the Listerine Emotional Appeal, consider "Which Twin Has The Toni?" No space in this advertising is given to emotional pictures—for example, moon-struck boy worshipfully stroking moonlit hair of gorgeous gal. No, the appeal here is to the intellect. Why be so foolish, in effect argues the copy, to pay nearly half a week's wages to a beauty parlor when you can have a Toni at home for a fraction of the cost? Look, reasons the copy, here are twins, and you can't tell which one has the professional hair-do and which one has the Toni.

A great deal of testimonial advertising with an "intellectual" slant is being used successfully. Cigarette advertising, for instance.

Noted throat specialists, making weekly examinations, report not a single case of throat irritation due to smoking Camels. Tobacco auctioneers, who know tobacco best, testify that Luckies buy, season after season, only prime, ripe, fine, golden leaf.

WE APE OUR BETTERS

There appears to be ample evidence that the great mass of ordinary people tend to respect the judgment and ape the conduct of the expert, knowledgeable individual. It is my notion, as I have already suggested in these columns, that the retail advertiser could make more frequent and effective use of testimonials. Why not a "Men of Distinction" campaign for a bank, or for a sporting goods store, or a laundry? If the testimony of successful men will sell whisky,



it ought to sell the beautiful laundering of one's shirts, or services of a bank, or rods and guns.

In every community, small or large, there live certain looked-up-to families whose example is imitated by the common run of their neighbors.

Do you want to prove to your community, prove intellectually, that wise, sensible, thrifty families deal with you? Then consider using the testimonial approach just suggested. It will also have the added strength of an emotional tug at the heart. There is no question but that the appeal of glamorous, interesting, important people is one of the most potent forces in advertising and selling.

Which should you employ in your advertising—the *Emotional* or the *Intellectual Appeal*? Are there any guide-posts, any principles to take into account? That is a hard question to answer dogmatically, and I shall not attempt it. But it has always seemed to me that one most important consideration is this:

AN IMPORTANT CONSIDERATION

If your product or service or business caters to a fully recognized con-

sumer need, the Intellectual Appeal is indicated. There is, let us say, a large and active demand for the kind of thing you sell (just for example, automobiles). It is therefore the first job of your advertising to persuade people that what you offer will give them more for their money than what your competitors offer.

But let us suppose the thing you deal in does not enjoy an active and voluntary large demand (for example, life insurance). In this case it is the job of your advertising to make more people want more life insurance—and to do this you may have to appeal to their emotions.

Generally speaking, there are two kinds of products and services—1) necessities that people cannot get along without: sugar, flour, soap, basic clothing, roofing, heating, transportation, etc., and 2) non-necessities, luxuries and semi-luxuries: encyclopedias, air travel, foreign travel for pleasure, costly perfumes and cosmetics, Odo-ro-no, Mum, cold storage lockers, Postum, Sanka, Accent, pianos, organs, cameras, sailing and power boats, Florida and Palm Springs, fine furniture, and first editions.

Which should you employ in your advertising—the *Emotional* or the *Intellectual Appeal*? Are there any guide-posts, any principles to take into account? That is a hard question to answer dogmatically, and I shall not attempt it. But it has always seemed to me that one most important consideration is this:

The *Emotional Appeal* in every instance should be backed up, in the body of the text or radio commercial, with reason-why-factual material. If yours is a soap that will give her "A Skin You Love to Touch," somewhere in the copy *TELL WHY*. Facts persuade, convince, sell.

It's Helped Business

Dealer Gives Salesmen 'Time Off' for Attending Sales Training Sessions

ST. LOUIS—One of the problems connected with sales-training of employees—the fact that many begrudge the time which must be spent away from their duties in sales meetings—has been eliminated with a "trade-a-minute" plan developed by May Appliance Co., here.

May Appliance has hired five additional outside salesmen and added an equal number to the floor sales crew in an effort to build volume. Many "sidelines" have been added which sell rapidly, but likewise require education of sales people.

When it was found that 15-minute sales meetings held each morning were bogging down due to lack of attendance, the management hit upon its current "Trade-A-Minute" plan.

Under this system, the employee is credited with each minute he spends at a sales meeting. In return, the store allows him to accumulate the minutes as "leave of absence time."

Thus, in six days, the employee can accumulate 90 minutes of "leave time" and can take a long lunch period, quit early in the afternoon, or report in late, while getting credit for the hour and a half.

Since this stunt was developed, every employee has attended every sales meeting, and better dissemination of selling ideas has led directly to a worthwhile volume increase.

In Selling to the Refrigeration and Air Conditioning Industry . . .



COUNT ON EDITORIAL SERVICE LIKE THIS TO BRING Results

6 Months Sales
In Commercial
Gain In Detroit

These and many other NEWS "firsts" were part of more than 57,000 col. inches of editorial material published in the NEWS in 10 months of 1949 . . . a lineage greater than the combined totals of all other publications in the field.



In addition, these and other continuing exclusive features aimed point-blank at solving the needs of the industry, plus special issues on "Air Conditioning Merchandising," "Home Freezer Specifications," and "All-Industry Exposition," keep interest high with the men who buy.

As the "marketplace of the industry," the NEWS for the first 10 months of 1949 also carried more paid display advertising lineage than the combined totals of all other publications in the field—over 52,000 col. inches.

Two fact-filled booklets show you how this NEWS dominance works for you. Let us send them to you.

AN INTERNATIONAL INSTITUTION * SUBSCRIBERS ALL OVER THE WORLD

AIR CONDITIONING AND REFRIGERATION News

BUSINESS NEWS PUBLISHING COMPANY * 450 W. FORT ST., DETROIT 26, MICHIGAN

Subscribe Now

Receive the greatest trade paper in the Industry—AIR CONDITIONING & REFRIGERATION NEWS. Published every week. Brings you latest news and vital information on household refrigeration, commercial refrigeration, air conditioning, home freezers; manufacturing, distributing, retailing, servicing, and contracting. Only \$5 per year, 52 issues.

Fill in coupon and mail today

AIR CONDITIONING & REFRIGERATION NEWS
450 West Fort Street, Detroit 26, Michigan

Gentlemen: Send the NEWS for one year.

\$5 enclosed Bill me Bill the company

Name.....

Company.....

Street.....

City..... Zone..... State.....

1-30-50

Signing Gibson-Bedard Licensing Agreement



A licensing agreement under which The Bedard Co., Ltd., L'Assomption, Quebec, Canada, will manufacture Gibson refrigerators in that country was concluded at a recent conference in Chicago between officials of both companies. Seated (l. to r.): L. W. Hamper, executive vice president, Gibson Refrigerator Co.; Thomas Z. St. Laurent, general manager, Bedard; Edouard Roy, president, Bedard; Charles J. Gibson, president, and Frank S. Gibson, Jr., secretary-treasurer, Gibson. Standing (l. to r.): Charles J. Gibson, Jr., assistant secretary and treasurer; A. M. Gibson, sales department; F. G. Heller, manager, export manufacturing department; J. L. Johnson, general sales manager—all of Gibson.

* * *

Gibson Licenses Bedard In Canada --

(Concluded from Page 1, Column 2) manufacturers in the country covered.

The program for each market is set up so the licensee gets the advantage of Gibson's experience in designing, engineering, tooling, and production for special markets. To reduce capital expenditures on tooling and equipment by its licensees, Gibson is designing special refrigerator models for foreign production.

The first step in the present Gibson licensing plan was extensive survey of all the markets of the world. This survey, started several years ago by Gregory V. Drumm, now Gibson's advertising manager, set an appliance potential for each foreign market based on such factors as population, family income, food habits, availability of electricity, and electrification plans. J. B. Croskery, Gibson market development manager, reviews the markets.

C. J. Gibson, president; Frank S. Gibson, Jr., vice president, secretary-treasurer; C. J. Gibson, Jr., vice president; and L. W. Hamper, executive vice president, have recently made trips to Europe and South America.

Second step in the Gibson program was the putting together of all its licensing activities under one head. This coordinating job was assigned to Francis G. Heller, veteran export man, who is now chief of the Gibson export manufacturing department.

Gibson plans to establish licensees

in every important country where the necessary raw materials, labor, and market are available.

The Canadian licensing agreement with Bedard was concluded by E. Roy and T. Z. St. Laurent, general manager of Bedard, on behalf of the Canadian company. The Canadian Fairbanks Morse Co., Ltd. will distribute the Gibson products.

Gibson sales in Canada will be directed by H. C. Rindfleisch, manager of the Automotive Dealer & Appliance Div. of Canadian Fairbanks Morse. The distributor will handle all advertising and sales promotion. Service facilities will be established by Bedard with Canadian Fairbanks Morse performing service at the distributor level through Canadian Fairbanks Morse branches and dealers.

C. T. Sorenson Dies After Long Illness

CLEVELAND—Clarence T. Sorenson, 64, refrigeration engineer and inventor, died Jan. 20 in his home after an illness of six months.

Sorenson held patents on a number of refrigeration developments and was a member of the Inventors Society of America. During his long career here, he served as consulting engineer for the Perfection Stove, Kelvinator, Norge, American Stove, and Gibson companies.

In Warfare or In Business

A business organization is like an army. It consists of units co-operating together in the battle for their common cause. Armies win battles by the units co-operating, not by obstructing each other. A business organization's battles must be won on the same basis. Our policies are such that a co-operative spirit throughout our entire factory and sales organization is the normal order of the day.

Seventeen years ago this advertisement appeared in the News. Today Universal Cooler believes in the same high principles and operates on the same ethical policy.

UNIVERSAL COOLER
DIVISION - NEWPORT STEEL CORPORATION
Marion, Ohio



Neb. Commission Backs Rule on Free Coil Service For Beer Retailers

LINCOLN, Neb.—The state liquor control commission, after a hearing, denied the request of the Nebraska Beer Wholesalers Association that Regulation 44, governing free coil service to beer dealers and certain other gratuities, be revoked.

At the hearing, attorneys for the various brewers and the attorneys for the liquor wholesalers argued successfully for retention of the regulation, contending that it was reached by agreement between interested parties and the commission.

Attorneys for the beer wholesalers, however, expressed the view that the regulation is a violation of the law (a previous Nebraska attorney general had held that it was). The wholesalers contend that it will put undue pressure on them, causing them to give free service to dealers or else lose the business to some other wholesaler who will.

Chairman Marcus L. Poteet of the liquor commission, who agreed with the beer wholesalers that the regulation should be revoked, but was voted down by his colleagues, pointed out that Walter Johnson, former attorney general, had twice advised the commission that such a regulation would be unlawful, while Attorney General Anderson takes the opposite view.

Poteet declared that under the Nebraska liquor statutes, it plainly states "that no retailer may accept, nor may any wholesaler give money or anything else of value."

REMA's Annual Meeting Scheduled For March 30 to Apr. 1 at Chicago

WASHINGTON, D. C.—The 1950 annual meeting and related sessions of the Refrigeration Equipment Manufacturers Association will be held in the Edgewater Beach hotel, Chicago, March 30-April 1.

Schedule for that period is as follows: March 30—meeting of the board of directors; March 31—annual meeting, membership luncheon, cocktail party, banquet, entertainment; April 1—meeting of product sections, credit group, committees, etc.

PLANS FOR ANNUAL MEETING

Plans for the annual meeting will be completed at a meeting of the board in Chicago's Hotel Sherman Feb. 7. Among other subjects to be considered at that time are preliminary plans for the 7th All-Industry Refrigeration and Air Conditioning Exposition on Navy Pier, Chicago, Nov. 5-9, 1951, and a report on arrangements for the 1950-1951 series of regional educational exhibits and conferences.

Members of the 1951 Show Committee, responsible for the over-all planning of all phases of the Exposition, are L. C. McKesson, Ansul Chemical Co. (chairman); G. R. Allen, Superior Valve & Fittings Co.; W. J. Stelpflug, Hussmann Refrigeration, Inc.; and Willis Stafford, Standard Refrigeration Co. A fifth member is to be appointed.

Rema reported that the first of the regional conferences to be definitely set is the one to be held in Long Beach, Calif., Nov. 17-19, 1950. It

will be held in conjunction with the 13th annual international convention of the Refrigeration Service Engineers Society.

Arrangements are now under way with various cities selected as possible locations for other conferences in the midwestern, southwestern, and eastern parts of the country. The first conference to take place in 1950 is planned for the southwest, Rema said, adding that it is hoped that arrangements can be completed to hold it in April.

Both the RSES and the Refrigeration Equipment Wholesalers Association are working closely with Rema in an effort to make the next series of even greater value than those held in San Francisco, Boston, Chicago, and Birmingham, Ala., Rema noted.

CONFERENCES COMMITTEE

The Rema committee in charge of over-all planning for the conferences is composed of F. G. Coggan (chairman), G. E. Graff (vice chairman), Willis Stafford, and H. T. Jarvis.

It was also reported by Rema that the group is now a member of the American Standards Association.

Dates and places of other Rema meetings are: food freezer section, Hotel Sherman, Chicago, Feb. 8; milk coolers product section, Hotel Sherman, Chicago, Feb. 9; water coolers product section, Hotel Sherman, Chicago, Feb. 10; credit group, Hotel Statler, Detroit, Feb. 24; and export group, Hotel New Yorker, New York City, March 7.

The First Really New

EVAPORATIVE CONDENSER

by **KRAMER**

Opens Many Opportunities in the Small Tonnage Field

Featuring . . .

- Small Capacities—2 to 8 tons
- Single or Multi-Circuits
- Stainless Steel Sump
- Extra Large Water Delivery
- Packless & Greaseless Pump
- Bare Tube Coils
- No Nozzles
- No Belts
- Low Cost
- For Freon, Methyl and Ammonia

WRITE FOR BULLETIN R162B

KRAMER TRENTON CO.
Trenton 5, N. J.

